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LOGISTIC SUPPORT IN THE VIETNAM ERA

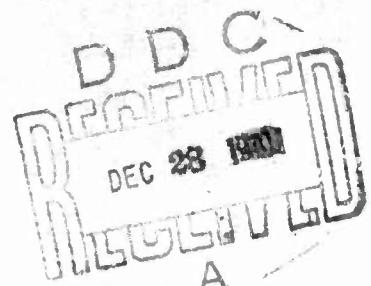
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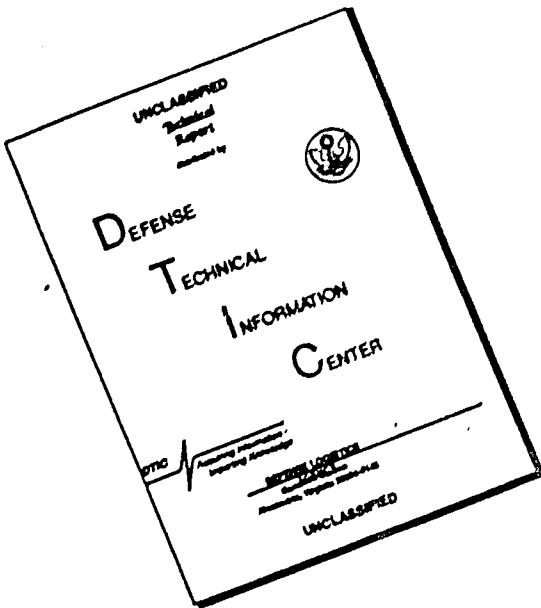
LOGISTICS PLANNING



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A REPORT
BY THE JOINT LOGISTICS REVIEW BOARD

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INSTALLATIONS AND LOGISTICS

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SUBJECT: Joint Logistics Review Board Report

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CHAPTER I

INTRODUCTION

CHAPTER I

INTRODUCTION

1. BASIS FOR STUDY. The Joint Logistics Review Board was directed in the Terms of Reference to "identify logistic lessons learned, including those of a planning nature, which may have a significant effect on readiness for and support of future combat operations."¹

2. SIGNIFICANCE

a. The value of planning was recently emphasized by President Nixon when he stated: "President Eisenhower used to say around the Security Council that it had been his experience in a really great crisis that plans were useless, but that planning was indispensable."² The Chairman of the Joint Logistics Review Board wrote to numerous senior military and civilian officials, all of whom held key positions during the Vietnam era, soliciting their views on logistic support of the Vietnam conflict. The majority of the respondents identified planning as one of the major weaknesses of the logistic process.

b. Logistics planning has two basic purposes: to formulate a set of logistic actions in support of operation plans and to establish logistic requirements. In the event that available resources do not satisfy the demand, planning actions must be taken to identify shortfalls and establish additional requirements or to impose constraints on operations and incorporate changes in operational plans.

c. Although logistics planning includes a wide spectrum of functional support areas, only those areas that pertain to Requirements Forecasting, Contingency Planning, War Reserve Materiel Planning, and Industrial Mobilization Production Planning will be addressed in this monograph. The logistics planning process encompasses two types of requirements planning. One is the development of overall logistic support requirements for the total force structure within the framework of the Logistics Guidance issued by the Secretary of Defense. The other is the identification of unique or special requirements for support of contingency plans. Both types of requirements must be addressed in the Service Planning, Programming, and Budgeting System. Some of the assets procured on a basis of funded requirements are stockpiled as war reserves. The quantitative and qualitative status of this War Reserve Materiel stockpile, in turn, directly influences Industrial Mobilization Production Planning and may have a long-term impact on the production base.

3. STUDY OBJECTIVES. In consonance with the Terms of Reference, study objectives are to review and evaluate logistics planning procedures during the Vietnam era and to make recommendations for improvement as regards the following planning areas selected for review:

- a. The adequacy of Logistics Guidance for Service planning and principal item requirements forecasting
- b. The current contingency planning procedures for logistic support of worldwide combat operations
- c. The War Reserve Materiel planning systems of each of the Services
- d. Industrial Mobilization Production Planning for anticipated requirements during contingency situations.

¹ Deputy Secretary of Defense, Memorandum, subject: Joint Logistics Review Board (JLRB), 17 February 1969.

² Office of the White House Press Secretary, Remarks of the President upon the presentation of the Medal of Freedom to the Apollo 13 Mission Operators Team at the Manned Spacecraft Center, Texas, 18 April 1968.

LOGISTICS PLANNING

4. ORGANIZATION OF MONOGRAPH

a. The Terms of Reference for the Joint Logistics Review Board directed particular attention to the following functional areas: Requirements Forecasting, War Reserve Stocks, Contingency Planning, and Industrial Mobilization Production Planning. A close relationship was noted between these areas, and it was therefore deemed appropriate that they could best be addressed in a single monograph.

b. This monograph is thus organized to cover these functional areas in separate chapters. Chapter II provides a general description pertaining to the major planning aspects of these logistical functional areas. Detailed review of these areas is provided in subsequent chapters of the monograph. Through an analysis of a contingency plan for SE Asia operations, Chapter III evaluates the effectiveness of the planning process and lays the groundwork for the major issues that are addressed in the subsequent chapters. Requirements Forecasting, Chapter IV, includes a review of Logistics Guidance for FY 63 through FY 71 and a detailed description of individual Service Requirements Forecasting procedures pertaining to principal items. Chapter V, Contingency Planning, discusses those segments of the logistics planning process related to contingency plans. Although the major portion of this chapter deals with logistic support of joint contingency plans, the full spectrum of the contingency planning cycle is described. War Reserve Materiel is addressed in Chapter VI through an in-depth analysis of existing policy and guidance promulgated at each echelon within the Department of Defense. Evaluation of each Service is made to ascertain degrees of management and overall control of War Reserve Materiel programs. An overview depicting the relationship between the Logistics Guidance and Service War Reserve Materiel Systems is described. Chapter VII addresses Industrial Mobilization Production Planning as an integral function of the total logistics planning process. The importance of accurately identifying the mobilization requirement and its relationship to production planning is stressed. Finally, Chapter VIII is a summary of the entire monograph and contains an overview, lessons learned, and selected key recommendations.

CHAPTER II
GENERAL DESCRIPTION

CHAPTER II

GENERAL DESCRIPTION

1. INTRODUCTION

This monograph highlights the command responsibility (Service and unified command) for logistics that was established by the National Security Act of 1947. The responsibilities of the Services and unified commands are oriented toward identifying and meeting logistic requirements related both to the total force structure and to the forces assigned to the unified command. Therefore, this chapter will briefly describe the logistics planning process as it impacts on the interface of the total force structure and unique contingency materiel requirements. Specifically, this chapter sets the stage for addressing, in subsequent chapters, the key areas of Requirements Forecasting, Contingency Planning, War Reserve Materiel, and Industrial Mobilization Production Planning.

2. LOGISTICS PLANNING PROCESS

a. As logistics planning for the materiel support of military operations proceeds, the force structure requirements of the Services and the unique requirements of the unified commands are developed from an appraisal of support of national strategy. Where the resources are inadequate, supplemental resources must either be acquired from other areas or from the production base. Otherwise, the plans must be changed to reflect the operational constraints. The planning process can best be described by addressing the interrelationship of four basic planning areas, i.e., Requirements Forecasting, Contingency Planning, War Reserves, and Industrial Mobilization Production Planning. Planning is accomplished by close coordination between the Service and the unified commands within this framework. How this coordination is effected and some of the related planning considerations are discussed in the following paragraphs.

b. The logistics planning process generates two fundamental types of materiel requirements: requirements related to the total force structure and unique requirements related to contingency plans (see Figure 1).

(1) The force-related requirements are computed by the Services within the framework of the Logistics Guidance and the Fiscal Guidance. Planning factors are based on support for a general operational plan postulated in the Guidance and include such criteria as support for:

- (a) Aircraft—Specific number of sorties
- (b) Combat Divisions—Specific number of combat division months
- (c) Ships—Initial allowances plus combat expenditures for a specified number of months
- (d) Supporting Base.

The requirements developed in accordance with guidance on support of the force structure are introduced into the Planning, Programming, and Budgeting System (PPBS) for funding support and subsequent satisfaction from the production base. The magnitude of the war reserve stockpiles and the status of the production base must be balanced to produce a logistic posture that can be rapidly expanded under contingency situations to meet increased operational requirements. These considerations gave rise to the D-to-P concept, i.e., the maintenance of sufficient stockpiles of war reserves to sustain operations from Deployment Day (D-Day) until the date that the production base can be increased to meet the expanded operational requirements (P-Day).

LOGISTICS PLANNING

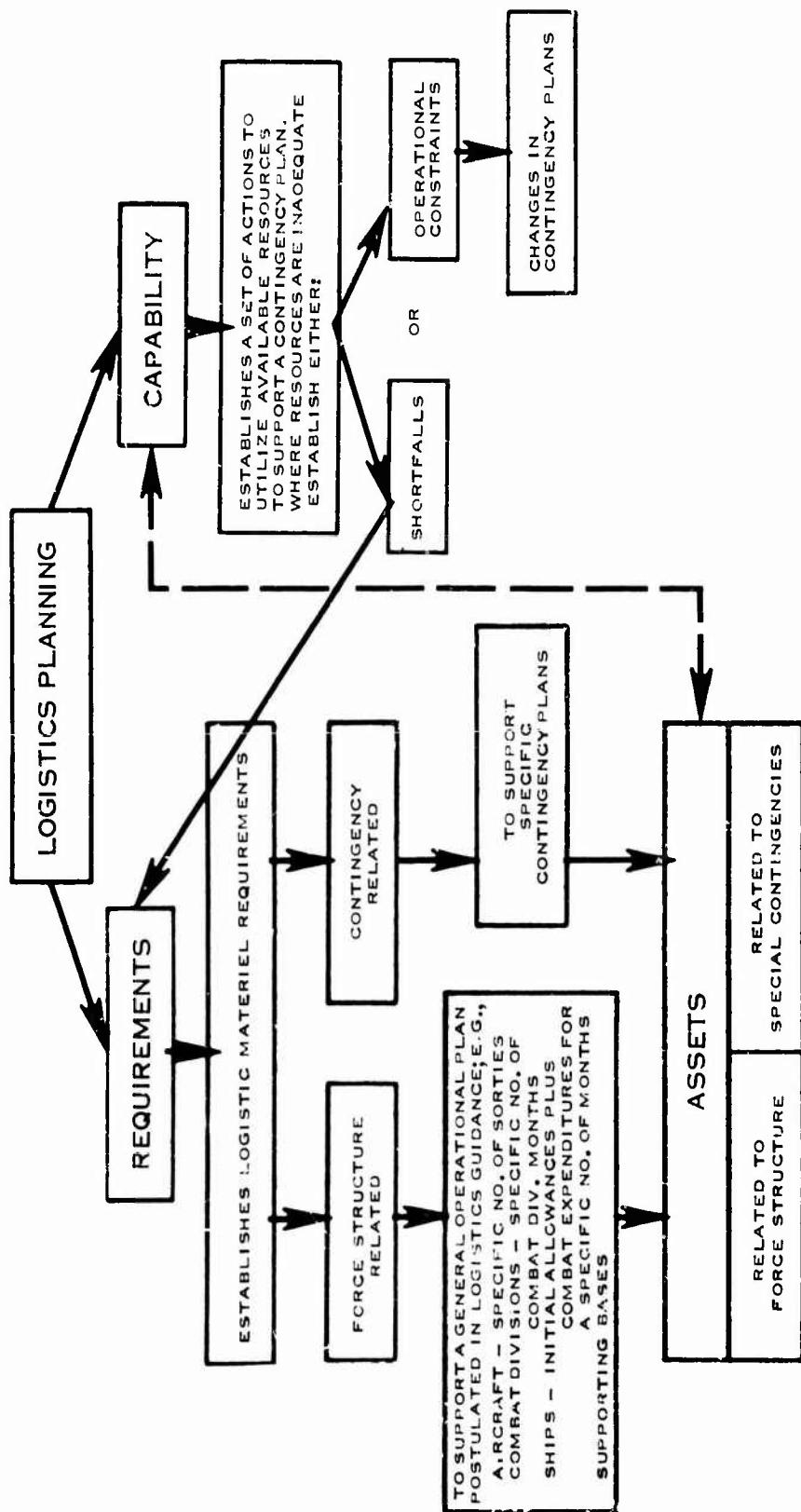


FIGURE 1. LOGISTICS PLANNING PROCESS

LOGISTICS PLANNING

Industrial Mobilization Production Planning thus bridges the gap between available assets and actual wartime requirements. It is necessary to balance requirements for funding war reserves against the time required for the industrial base to reach wartime consumption rates. These aspects are fully covered in the chapters on Requirements Forecasting, War Reserves, and Industrial Mobilization Production Planning.

(2) Unique requirements are those requirements relating to specific unified command contingency plans that cannot be satisfied within the capability established by total force structure requirements planning. Thus, they are additive to the total force structure requirements. These requirements may be identified in logistic appraisal of contingency plans. Since Logistics Guidance does not address these requirements in specific detail, they have not always received the requisite priority in the Service PPBS and have often not been satisfied. A methodology to identify unique requirements and to satisfy these requirements is addressed in the chapters on Contingency Planning and War Reserves.

3. PLANS, PROGRAMS, AND GUIDANCE RELATING TO LOGISTICS PLANNING

a. General. Initial operations of a contingency nature must, through necessity, be supported by forces and resources in being. War reserves must be provided to sustain operations upon commencement of hostilities until the materiel pipeline becomes effective. The magnitude of the war reserve stockpile, the status of the peacetime production base, the requirements generated by the Service logistics planning system, and the unique requirements generated within the unified command planning system must be thoroughly coordinated. The PPBS bridges the gap between requirements and capabilities within the limit of funding constraints. The major plans or programs of the PPBS during the Vietnam era are summarized below.

b. Five Year Defense Program. Under the PPBS, the Five Year Defense Program (FYDP) is the summation of the approved programs of all Department of Defense (DOD) components as related to the force structure required to carry out the national strategy. As the foundation of the PPBS, the FYDP provides continuity and mid-range implications visibility out to 8 years for forces and 5 years for resources and provides a method for relating resources to programs.

c. Joint Strategic Objectives Plan. The Joint Strategic Objectives Plan (JSOP) is prepared by the Joint Chiefs of Staff for submission to the Secretary of Defense and the President. Its purpose is to advise them on the military strategy and force structure requirements for attaining the national security objectives. Moreover, it provides guidance to unified and specified commands and to the Services. It contains the projected national military strategy statements of mid-range (5 to 8 years) military requirements submitted for information and consideration in connection with the preparation of the various guidance and force memorandums, the FYDP, and the DOD budget. The JSOP utilizes the Joint Intelligence Estimate for Planning and takes into consideration the Joint Strategic Capabilities Plan and the Joint Long-Range Strategic Study.¹

d. Joint Strategic Capabilities Plan. Although not directly related to the PPBS, the Joint Strategic Capabilities Plan (JSCP) provides the planning guidance on strategy, forces, and logistics to the commanders of unified commands based on projected military capabilities for the short-range period (1 year). It assigns tasks to the unified and specified commands that govern the development of contingency or operation plans and planning guidance to the Services for support of the forces assigned to the unified and specified commands. The JSCP requires that the commanders of unified and specified commands immediately advise the Joint Chiefs of Staff when shortfalls inhibit the implementation of an operation plan. It is this phase of logistic planning that is critical. If the capability acquired as a result of total force structure planning is inadequate to support specific contingency plans, then shortfalls identified in the logistic appraisal of these plans become unique requirements that must be satisfied within the PPBS before the contingency plans can be implemented. This interface of total force structure and special

¹Joint Chiefs of Staff, Policy Memorandum 84, subject: Joint Strategic Planning System, 19 June 1968, p. 16.

LOGISTICS PLANNING

contingency planning will be addressed further in Chapter V, Contingency Planning, and Chapter VI, War Reserves.

e. Logistics Guidance. Logistics Guidance is issued annually by the Secretary of Defense to provide a general baseline for logistic planning, to support the force structure, and to ensure that the military services and the Defense Supply Agency (DSA) are working on common assumptions in conformity with national policies and objectives. The scope and purpose of the Logistics Guidance documents changed materially during the Vietnam era. During the period FY 63 - FY 71, these documents evolved from a memorandum on procurement guidelines and objectives to a Defense Guidance Memorandum dedicated to logistics. The purpose of these documents is to establish procurement objectives for materiel support of the approved forces. The FY 72 Logistics Guidance document reflected changes in format, scope, and purpose. These changes were the result of the revised role of the Logistics Guidance document in the new PPBS. In essence, the Services now develop logistic requirements in accordance with both logistic guidance and concurrent fiscal guidance. The new Logistics Guidance provides the Services with broad objectives against which the Services are to plan a materiel support posture for the FY 72 budget year and 4 years into the future.

f. Budget Guidance. Annually, the Office of the Secretary of Defense (OSD) publishes a document that announces to the military departments and other DOD agencies the general guidance to be used in preparing their respective budget estimates. The document is usually published in June of each year and requires submission of estimates to cover the budget year, which begins on 1 July, 1 year following publication of the Budget Guidance, i.e., the July 1969 Guidance relates to FY 71. The guidance is general in nature. Its main purpose is the promulgation of standard criteria on which the Services and agencies can make budget estimates and their timely submission in accordance with established schedules. This is to allow for a thoroughly refined budget to be sent to the President for his presentation, in turn, to the Congress during January. The annual Budget Guidance applies to all DOD agencies and specifies that the budget estimates will reflect the approved FYDP as modified by Program Change Decisions or those reflected in various other decision memorandums or Development Concept Papers.²

g. Program Development (FY-72 PPBS). The programs of the military departments are developed annually, using the JSOP as the starting point and culminating in the submission of budget estimates. The programs develop in this general fashion: The JSOP is submitted to the OSD, where it is reviewed and forms the basis for issuance of Fiscal and Logistics Guidance to the Services and Defense Agencies; within the guidelines provided in the Logistics Guidance and Budget Guidance memorandums, the Services and Defense Agencies develop force structures and materiel and other support requirements and price out the funds requirements, which constitute the budget submission; and negotiations between the OSD and the Services result eventually in decisions, which, in turn, result in an update of the FYDP and the development of the Services' annual program.

4. RESPONSIBILITIES FOR LOGISTICS PLANNING. Each echelon of the military command structure shares, to varying degrees, responsibility for the logistics planning process. A more thorough description of logistic responsibilities is provided in Chapter 3 of Volume II of the Joint Logistics Review Board report. Agencies and their responsibilities in the logistics planning process are as follows:

a. Joint Chiefs of Staff³

(1) Prepare integrated logistic plans, which may include assignment of logistic responsibilities to the Services and the DSA in accordance with such plans.

(2) Prepare integrated plans for military mobilization.

²Assistant Secretary of Defense (Comptroller). Memorandum, subject: FY 1970 Revised and FY 1971 Budget Estimates (Revised), 30 July 1969, p. 1.

³Joint Chiefs of Staff Publication 2, Unified Action Armed Forces, 23 November 1958, p. 11.

LOGISTICS PLANNING

(3) Review major personnel, materiel, and logistic requirements of the Services in relation to strategic and logistic plans.

(4) Review plans and programs of commanders of unified and specified commands to determine adequacy, feasibility, and suitability in accomplishing assigned missions.

(5) Verify the adequacy, on a continuing basis, of the approved Logistics Guidance and the resources available to the Services to support the general war and contingency plans.

b. Commanders of Unified and Specified Commands⁴

(1) Exercise directive authority within their commands in the field of logistics to ensure effectiveness and economy in operations and to prevent or eliminate unnecessary duplication of facilities and overlapping of functions among the respective Service components.

(2) Review the budget recommendations from the component commanders to their parent Services to verify that such recommendations are in agreement with current plans and programs.

(3) Review the requirements of component commanders and coordinate priorities, programs, and interservice support agreements to ensure utilization of resources.

c. Military Departments⁵

(1) Determine total logistic support required for U.S. forces, including those planned to be mobilized or activated.

(2) Provide logistic support for component commands.

(3) Provide the commanders of the unified and specified commands with information that will permit those commanders to determine whether or not planned combat operations are logistically supportable.

⁴Ibid., p. 29.

⁵Ibid., p. 16.

CHAPTER III

**CONTINGENCY PLANNING FOR LOGISTIC SUPPORT
OF U.S. MILITARY OPERATIONS IN VIETNAM**

CHAPTER III

CONTINGENCY PLANNING FOR LOGISTIC SUPPORT OF U.S. MILITARY OPERATIONS IN VIETNAM

1. INTRODUCTION

a. Logistic support planning in the Vietnam era can best be studied through its relationship to the contingency plans for Vietnam. These plans are representative of the contingency plans being produced by the unified commands during the Vietnam time frame. They provide a basis for determining the overall validity and effectiveness of planning in relationship to the military operations undertaken. Therefore, an extensive review was conducted of the contingency plans that had been prepared by the Commander in Chief, Pacific (CINCPAC), and his subordinate commands in preparation for possible contingency operations in SE Asia. The review does not, however, include the general Service planning that has its origin in departmental logistics guidance. Nor does the review trace the component commanders' requirement submissions and the subsequent actions taken by the Services. Services planning processes are discussed specifically in subsequent chapters.

b. Although it was generally recognized that the contingency plans for Vietnam had not in essence been implemented, it was considered appropriate to conduct this review to ascertain where direct relationships did exist and where there were major differences. The rationale of these comparisons was expected to lead to meaningful conclusions concerning the experienced value of contingency planning in this instance and to highlight those logistic areas in the plans where improvements could be proposed.

c. Detailed review of the contingency plans previously prepared for possible military operations in SE Asia indicated that they had correctly identified the limiting shortfalls. Unfortunately, the planning process was incomplete because it did not develop changes in courses of operations or result in acquisition of logistic resources to overcome these deficiencies. Consequently, when subsequent operations proved the validity of the planning and the shortfalls did in fact develop, the logistic situation developed unsatisfactorily with massive problems in port congestion, overloading of the depot structures, and backlogs in construction--all of which required top attention in Service, unified command, and the Office of the Secretary of Defense (OSD) channels. Although these plans were not implemented exactly as written, they did provide the basis or point of departure from which further planning could and did commence.

d. The CINCPAC contingency plans pertaining to Vietnam were first produced during the year 1959 as a contingency measure for possible active U.S. military operations to counter either covert or overt military pressures in the event that they were brought to bear by insurgents or neighboring communist regimes. From 1959 to 1965, these plans underwent periodic updating and revision, until they had probably been more widely and completely developed by the various commands and agencies than any other set of Pacific Command (PACOM) contingency plans. These plans were considered to have gone further through the established planning cycle than any other contingency plans, as evidenced by the publication of transportation tables by CINCPAC and deployment movement schedules by the Commander in Chief, STRIKE Command (CINCSTRIKE), for the augmentation forces and follow-on support earmarked to come from the continental United States (CONUS). This was primarily attributed to the continued command and high-level Government interest that had developed as the result of a continually deteriorating military situation in SE Asia. It also evolved from the increasing need for U.S. assistance being generated to cope with the expanding communist threats to the sovereignty of the Government of South Vietnam.

LOGISTICS PLANNING

e. Review of the plans and the Vietnam experience was generally based on the significant events that were scheduled to occur in the plans or that did occur during the calendar years 1965 and 1966. This was done to limit the scope of the review time-wise and in recognition of the fact that most of the logistic actions contained in the plans would have been undertaken or completed during that period of time.

2. BACKGROUND

a. General. Prior to the Vietnam era, CINCPAC and his subordinate commands had produced a series of contingency plans that were designed to deal with emergency situations that might develop in SE Asia and that would require U.S. military assistance. The principal planning pertaining to possible U.S. military operations in Vietnam was produced as an omnibus plan that set forth several alternatives that could be employed under specific circumstances and under designated phases. This version of the plan, prepared by CINCPAC in September 1962, was a rewrite of a plan previously published in 1959. The revised version was approved by the Joint Chiefs of Staff in November 1963. Updated supporting plans had been produced by the PACOM component commands, the Commander, U.S. Military Assistance Command, Vietnam (COMUSMACV), and other subordinate and supporting commands and agencies. Thus, within the framework of the established planning system in existence at that time, extensive planning efforts had been undertaken to prepare for possible U.S. military operations in Vietnam.

b. Purposes of the Plans

(1) Although the plans did not as a rule specifically list the purposes for which they had been produced, it was evident that they would be used to outline the concepts of operation and to provide for the commitment of military resources necessary to achieve the established military objectives. It is considered that the principal purposes for which these plans were conceived and published were essentially accomplished during the early planning phases for the buildup of U.S. and allied forces in SE Asia. To accomplish these purposes the plans:

(a) Provided an adequate basis or point of departure from which realistic planning could proceed during the actual buildup

(b) Tasked the component and Services to provide for the logistical support of their respective forces and to make provision for the proper coordination or integration of their support forces in the objective area under the command or operational control of COMUSMACV

(c) Announced the concepts for operations and logistic support that could be further expanded or altered to fit the circumstances encountered during the subsequent planning phases for the buildup in Vietnam

(d) Provided sufficient information and data for the performance of a complete logistical appraisal that included identification of the major areas of weakness and the constraints that would require further study or attention

(e) Identified the major limiting factors and characteristics pertaining to the planned area of operations (Vietnam) and accurately assessed the impact they would have on the support of combat operations by U.S. or allied forces in that area.

(2) Conversely, however, the plans either ignored or inadequately provided for some areas affecting logistic support. They did not, for example:

(a) Estimate the expected duration of the planned combat operations that would impact upon planning for base development and the levels of logistic support required in the objective area

(b) Identify or lead to the identification of specific requirements for all essential major items of equipment or materiel

LOGISTICS PLANNING

- (c) Recognize the critical nature of existing deficiencies in port operating capabilities in Vietnam or the adverse impacts these deficiencies would have on logistic support operations
- (d) Fully appreciate the magnitude of the construction effort subsequently determined to be required for the support of U.S. and allied forces
- (e) Establish or provide for an integrated communications organization within the objective area under the control of COMUSMACV.

c. Nature of the Plans

- (1) Review of these specific contingency plans revealed that they were basically tasking documents through which the commander of the unified command tasked his subordinate commands (component and COMUSMACV) to prepare plans supporting his plan. The unified commander's plan included the scheme of maneuver, commitment of allocated major military forces, and concepts for both tactical operations and logistic support. Additional instructions and guidance were included in the plans as considered necessary to ensure accomplishment of the overall missions assigned by the Joint Chiefs of Staff in their Joint Strategic Capabilities Plan (JSCP) for that period.
- (2) Each of the subordinate commanders, in turn, developed supporting plans that were designed to carry out the tasks assigned to them by CINCPAC. Although these plans did contain selected additional information, considerable repetition and duplication were noted. This repetition could be partially justified, however, on the premise that the subordinate commands of the components would need this information and they would not get a copy of CINCPAC's plan. In any case, the component commanders methodically accounted for all their responsibility by further tasking their subordinates to perform the required logistic functions. These functions included both the in-country logistic support furnished to their forces and that support provided from offshore sources. The Commander in Chief, U.S. Army, Pacific (CINCUSARPAC), for example, assigned a major logistic support role to the Commanding General, U.S. Army, Ryukyu Islands (CG, USARYIS), on Okinawa, who was tasked to operate the principal Army offshore support base. The Commander in Chief, Pacific Air Forces (CINCPACAF), assigned practically all logistic support functions for which he was responsible to the Commander of the Thirteenth Air Force at Clark Air Base. The Commander in Chief, Pacific Fleet (CINCPACFLT), likewise, assigned the major naval logistic roles to the commanders of the Seventh Fleet and the Service Force, Pacific. This method of tasking was not only proper but was actually essential, since the production units that possessed the logistic performance capabilities were either located in or would be assigned to these lower echelons of these commands. Many of these units did not become directly involved in the contingency planning process, nor were they aware of their planned association with these particular contingency plans. In fact, some units did not even exist at the time.
- (3) This type of tasking is significant when it is considered that the plans generally required preparedness rather than action from the respective commanders. There were relatively few instances, other than in the area of supply requirements computations, where specific actions were to be undertaken solely on the strength of instructions contained in the contingency plans. Facilities were not to be constructed, supplies prestocked, or forces deployed just because the plans established such a requirement. The specific actions undertaken within PACOM prior to March and April 1965 to improve the response posture of the command could not usually be traced directly to any specific contingency plan pertaining to the area. As was experienced during the troop buildup, it would take positive and, in some cases, high-level command directives to initiate the actions that had already been identified in the plans as being necessary to the support of U.S. combat operations in Vietnam. Even then, some of the guidance or decisions were to come on a piecemeal or delayed basis, often in response to stated requirements that had been presented in the same way.

LOGISTICS PLANNING

d. Implementation of Plans

(1) In this situation, as in other military contingency operations, existing plans had to be modified to fit the situation that was developing. It is probable that no contingency plan of the magnitude of those pertaining to Vietnam would ever be implemented by the simple order: "Execute." To do so would presume that the situation in the planned objective area was developing along the lines assumed or prescribed in the contingency plans without exception. Our ability to predict the future in possible military contingency situations did not and probably never will achieve that degree of accuracy.

(2) Implementation of a plan would more logically occur on a piecemeal basis in which the plan is used as a starting point for continuation of the planning process in response to a developing situation. The applicable provisions of the previously prepared plans are either expanded or adjusted as appropriate to fit the current events. It was this type of planning environment that began developing early in calendar year 1965 in connection with the possible introduction of U.S. combat forces into Vietnam.

(3) The major constraints and limitations existing in the contingency plans and the extensive listings of the actions considered prudent by the Services were all highlighted during the logistical appraisal conducted by the Joint Chiefs of Staff on these plans during February and March of 1965. These actions were derived from detailed study and analysis of the plans, coupled with additional intelligence and considerations that were considered appropriate at that time. The checklist of actions developed during this appraisal served to bridge the existing plans with the planning that was subsequently undertaken in connection with the buildup. Thus, the planned actions that were actually carried out during the buildup support the contention that certain aspects of the plans had in fact been implemented in a manner appropriate to any contingency plan of that type.

e. Comparison of Plans With Actual Experiences. Any comparison of the contingency plans for SE Asia with the actual buildup of U.S. and allied forces in Vietnam should properly take into account the major differences in the two.

(1) The plans accurately described the geographic area of Vietnam as austere and generally incapable of furnishing any significant support for U.S. forces. This environment would necessitate importing all the equipment and material needed by U.S. forces to construct facilities during the buildup. The plans had also identified the key communication and population centers that would require securing by U.S. forces; these centers were generally the ones that were eventually occupied by U.S. troops during the buildup.

(2) Major differences were to occur, however, in the areas of troop deployments, the type and scope of combat operations undertaken by U.S. forces, and the scope and levels of base development actually accomplished. Whereas the plans had called for a rapid deployment of forces with a majority of the elements arriving in the objective area during the first 30 to 60 days, deployments during the buildup were carried out on a piecemeal basis over a period that spanned over 4 years. Actual deployments greatly exceeded the numbers of troops called for by any phase of the plans.

(3) The tactical operations envisioned in the plans ranged from counterinsurgency operations, with a relatively small U.S. force operating in a reinforcing role, to overt tactical operations by sizable U.S. forces against invading enemy forces. These operations would have been accomplished in a series of phased tactical operations accompanied by the forward deployment of the logistical complexes. The U.S. and allied forces became engaged in Vietnam, however, with much larger forces than had been planned for either type of warfare. They undertook varying defensive and offensive combat operations that required major adjustments in the levels of logistic support requirements.

(4) The base development planning accomplished in advance for support of the plans was extremely limited in its application and was generally confined to construction of only the minimum essential facilities needed by U.S. forces to conduct military operations. The lowest

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and most austere standards of construction were specified for the earlier phases of the construction program with upgrading to higher approved levels during the later phases. Many of the construction projects undertaken during the buildup in Vietnam were of much higher standards and of a more permanent nature than had been considered appropriate in the plans. Other differences of this nature can be noted when comparing the provisions of the plans with related areas of logistic support experienced during the buildup.

3. PLANNING FOR SUPPORT OF OPERATIONS

a. General

(1) The CINCPAC contingency plan was designed as an omnibus plan to offer several alternative courses of action to U.S. forces in countering both covert and overt military operations by communist forces on the mainland of SE Asia. It identified the major U.S. forces that would be committed to the area under each of the specified phases. It also outlined the concepts of operation that would be used for the employment of these forces and the broad guidance to subordinate and supporting commands for use in the preparation of their plans.

(2) Supporting plans were prepared by each of the PACOM component commands in coordination with their counterpart Services. They contained information and guidance pertinent to the employment and support of their respective forces. Each of these plans included a logistics annex patterned on a standard format and designed to disseminate the necessary guidance to ensure the coordinated logistic support of their forces. Other plans were produced by their first-line subordinates and, in some instances, by elements down still another level of command.

(3) The PACOM contingency plans were also supported by commands and agencies in the CONUS, particularly in the areas of force augmentation and follow-on logistic support. CINCSTRIKE and his Army and Air Force component commands—U.S. Continental Army Command/U.S. Army Forces Strike Command (USCONARC/USARSTRIKE) and Tactical Air Command/U.S. Air Forces Strike Command (TAC/USAFSTRIKE)—provided for Army and Air Force augmentation forces from the CONUS base in accordance with the stated requirements by their counterparts (the PACOM component commands).

b. Logistic Concepts

(1) Concepts were announced in the various plans for conducting and logically supporting tactical operations in Vietnam. These concepts varied from the consideration of national strategy and goals, which were incorporated by CINCPAC, to the details for specific operations, which were treated by lower levels of command. The key factor in CINCPAC's logistic concept was tasking his component commands to provide or arrange for the logistic support of their forces and not to deploy forces to Vietnam unless advanced arrangements had been made for the support necessary to sustain them there. CINCPAC also directed COMUSMACV to exercise operational control over logistic elements in the objective area and to effect the coordination necessary to ensure adequate logistic support of U.S. and allied forces engaged in joint and/or combined operations. A key factor in the attainment of integrated logistic systems in Vietnam was the realignment of logistic responsibilities given by CINCPAC to his component commanders during the period April-July 1965. This included the assignment of common functions in the logistic areas of common items of supply, petroleum, oil, and lubricants (POL) support, and operation of water ports.

(2) The logistic concepts published by the PACOM component commands in their supporting plans generally conformed to the logistic systems and practices within their commands. Most of the logistic support activities and procedures had become routine through the publication of standing operating procedures and other directives in consort with their respective military services. The principal task generated by the contingency plans was to extend these systems into the objective area in such a way as to ensure continued and responsive logistic support for the U.S. and allied forces employed there with the least amount of disruption or delay.

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(3) The logistic concept planned for the support of Army forces involved the establishment of logistic support complexes in Vietnam backed up by an offshore logistic base either in Okinawa or the Philippines. The complexes in Vietnam were to be comprised of advanced bases, generally along the Qui Nhon-Pleiku axis; intermediate support bases in the Nha Trang-Ban Me Thout areas; and the heavier base support complex in the Saigon-Bien Hoa region (Figure 2). The logistic support complexes eventually established in Vietnam to a large degree conformed to this concept as originally developed in the supporting plans. Okinawa became the site for the planned offshore support base. A Secretary of Defense directive issued on 12 December 1966 required the Army to discontinue stocking reserve materiel on Okinawa for forces in Vietnam and called for direct shipment of supply support from CONUS to Vietnam.

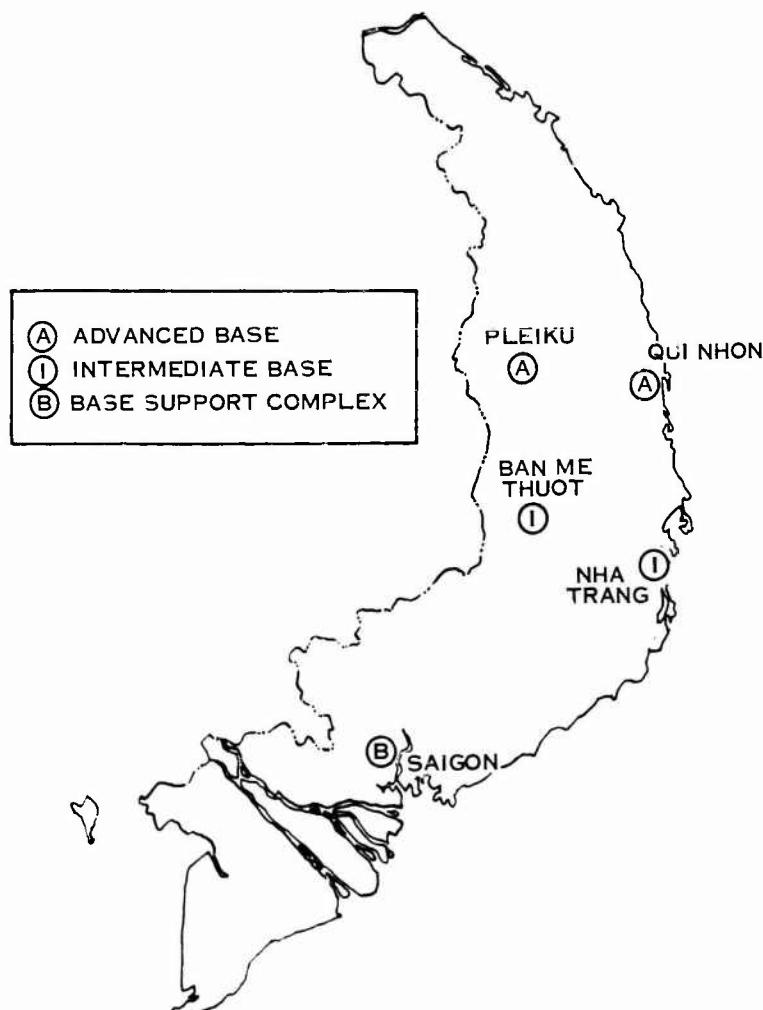


FIGURE 2. PLANNED ARMY LOGISTIC SUPPORT COMPLEXES

(4) The planned concept for the logistic support of Air Force elements employed in Vietnam was built on the premise that each base would strive to become self-sufficient in order to provide support for forces assigned to the base in accordance with the levels of support prescribed. This premise placed reliance on the Army's mission of providing interior lines of communication support to all U.S. forces in the objective area. Forward Operating Bases (FOBs) were to be located in Vietnam and were to be capable of providing the service and support normal to air base operations. The bases initially designated as FOBs were Da Nang, Tan Son Nhut, and Bien Hoa. Others would be added as needed. Backup support to these FOBs would

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be furnished by the Main Operating Bases (MOBs) located offshore in the Philippines, Japan, and Okinawa. The concepts evolved during the buildup generally followed this pattern, as will be discussed under succeeding paragraphs relating to logistic organizations.

(5) The logistic concept outlined for the support of naval forces operating in SE Asia anticipated the employment of mobile offshore capabilities coupled with logistic over-the-shore operations (LOTS) in support of Marine Corps elements engaged in combat operations in the Da Nang area. The forces needed to perform these logistic functions were to be provided from the organic assets of the III Marine Amphibious Force (MAF), the Seventh Fleet, and the Commander, Service Force, Pacific (COMSERVPAC). The concept called for the employment of the amphibious force capabilities assigned to these commands in addition to other units from other sources as identified in the plans. The concept did not include the establishment of a naval support activity ashore in the Da Nang area or the construction of a principal port facility—both of which were destined to occur during the buildup.

c. Logistic Organizations and Systems

(1) The logistic support organizations and systems outlined in the PACOM plans for the possible support of U.S. forces in SE Asia reflected, for the most part, organizations and systems that were already in being within the component commands. As previously noted, some adjustments and modifications had to be made to accommodate the extension of the wholesale support missions into the objective area and to meet the peculiar needs of the forces of each of the components or Services. The makeup of logistic organizational structures by the components was significantly influenced by the methods planned for committing and sustaining their forces in the objective area.

(2) The Army, for example, planned to employ its combat and support forces under the Army component command of USMACV and to retain only small and specialized elements under the direct command of CINCUSARPAC. Air Force plans called for committing all the initial unit deployments from the PACOM area to the Air Force component command under USMACV, but would retain most of the tactical unit deployments from CONUS under CINCPACAF command. This was done to reconstitute his general war posture capability, which would be lost as the result of initially deploying PACOM assigned units to SE Asia. This distinct division of forces would give way during the buildup to the more practical method of assigning units to operational bases in accordance with tactical and support requirements. The Navy planned to commit all elements of the III MAF to the operational control of COMUSMACV (with the CG III MAF serving as naval component commander) but retained all afloat naval tactical and logistical elements under the command of CINCPACFLT. Expanded operations during the buildup in Vietnam brought about a departure from this policy by the assignment of naval elements employed in Vietnam to the naval component commander under USMACV.

(3) Logistics planning undertaken by COMUSMACV and CINCPAC in conjunction with the Joint Chiefs of Staff called for the establishment of logistic support areas in Vietnam to support U.S. and allied operations. These areas generally followed the traditional Corps Tactical Zones (CTZs) utilized by the Vietnamese Armed Forces and were assigned to the Service components as indicated in Figure J. While COMUSMACV had originally planned to require the 1st Logistical Command to operate logistic support areas throughout Vietnam that would include responsibility for common items of supply to all U.S. forces, CINCPAC directed modification in these plans by assigning this responsibility to CINCPACFLT for the I CTZ. The Army was to operate the logistic areas in the other CTZs, whereas the Air Force would provide common item support to all units located upon their in-country forward air bases.

(4) The further development of logistic complexes to provide integrated logistic support on an area basis continued to dominate the logistics planning efforts of the USMACV and PACOM staffs during the remainder of 1965 and well into the year 1966. The absence of adequately secure north-south land routes made it necessary to depend almost entirely on airlift and shuttle sealift for the movement of supplies between the major support areas. It had also become obvious to the planners that the already overcrowded port of Saigon could not continue to receive and transship the increasing volumes of supplies for the northern areas. The concept

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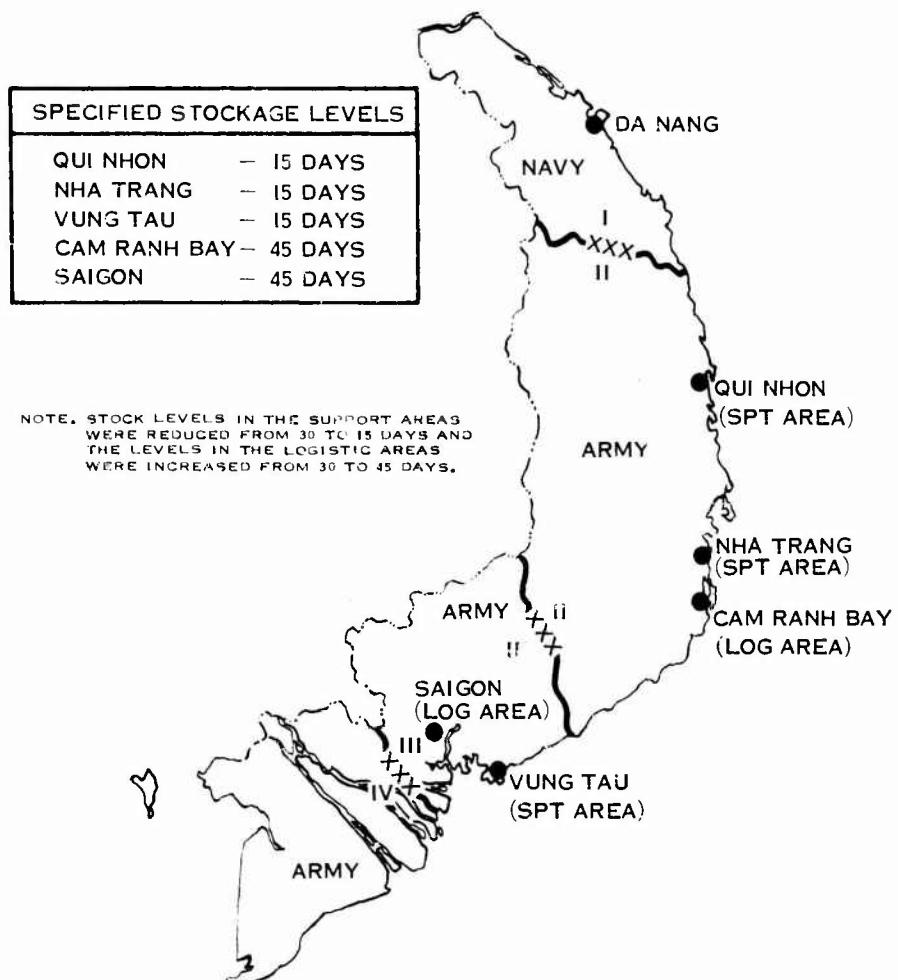


FIGURE 3. LOGISTIC SUPPORT AREAS—VIETNAM, 1965

emerged for the establishment and operation of "logistic islands," which would be served by principal airports and seaports and would contain logistic support activities necessary to support the U.S. and allied forces operating within their assigned areas of responsibility. These logistic islands are illustrated in Figure 4.

(5) Planning for the establishment of logistic organizations and facilities necessary to support U.S. and allied combat forces in SE Asia was undertaken by the responsible commands and agencies during 1965. Development of the logistic bases within South Vietnam continued at a much faster pace during 1966. The difficult challenge facing the military planners was to broaden and build the logistic base concurrently with the introduction of increasing numbers of combat forces. There would be no methodical logistic buildup or preparation of the support bases beforehand. In fact, it was decreed during a PACOM planning conference in September 1965¹ that the required force levels to meet the threat in Vietnam would dictate the logistic buildup—the logistic capability would not dictate the force levels. This crucial decision was based on the fact that both combat and logistic elements could not be made available from the CONUS base during the same time frames and the tactical situation in South Vietnam was considered serious enough to require the immediate commitment of U.S. combat power. The

¹Commander, U.S. Military Assistance Command, Vietnam, Command History 1965 (U), 20 April 1966, p. 117 (TOP SECRET).

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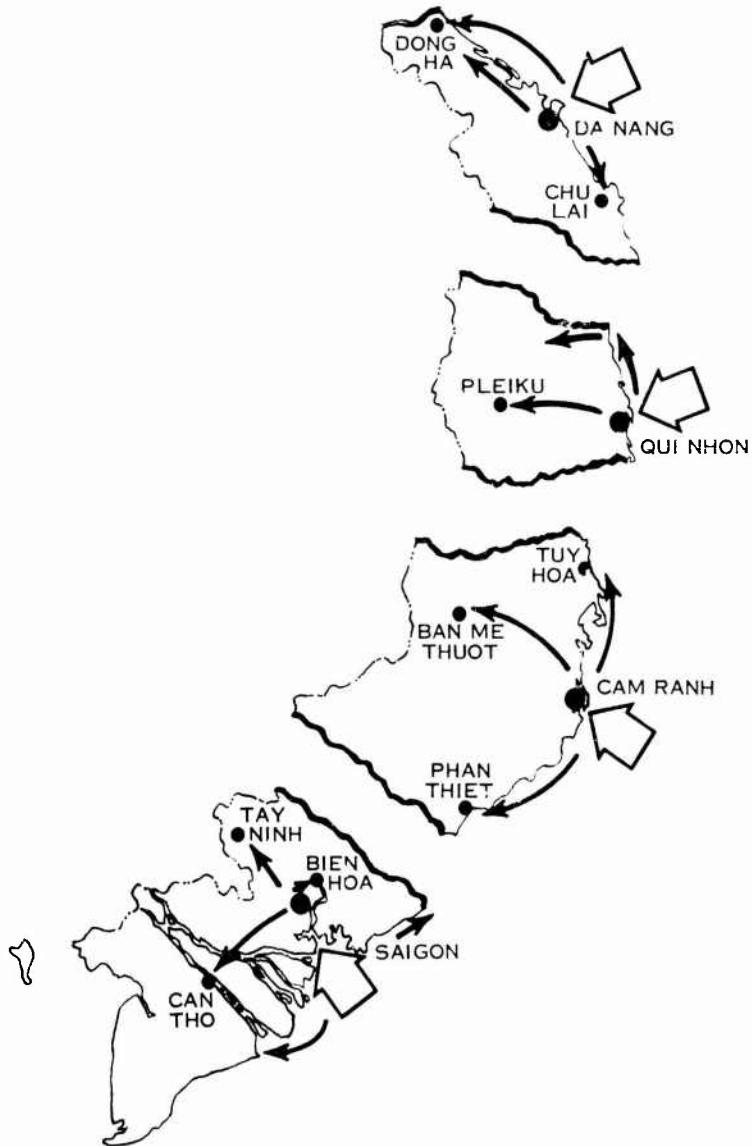


FIGURE 4. LOGISTIC ISLANDS—VIETNAM, 1966

position of COMUSMACV on this issue was destined to change before the end of 1965. The position was adopted by COMUSMACV in November 1965 that if the logistic forces were not brought into balance with the combat elements, and unless this balance were maintained during future deployments, logistic support would become submarginal and sustained combat operations could not be conducted there. This viewpoint was occasioned by the increase in combat intensity that had resulted from an accelerated buildup of U.S. forces and by increased infiltration of North Vietnamese Army forces from the North. Thus, the rule that had been established in the contingency plans—that deployments to SE Asia could be made by the Services only after their logistic support was ensured in the area—was again a matter of urgent policy.

(6) In accordance with CINCPAC direction, an integrated logistic support system was developed under COMUSMACV. This system was based on the basic principle of centralized control and decentralized execution. The area approach to supply and services support was established to further delineate the logistic responsibilities of the subordinate component

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commands and to ease the burden on the rather austere inland transportation systems. It was directed that:

(a) The Army would perform common support within the II, III, and IV CTZs and any portion of the I CTZ where major Army forces were deployed.

(b) The Navy would perform common support in the I CTZ.

(c) The Air Force would perform common support for its air bases and for any forces located on these bases.

(7) The logistic organizations utilized by the Service components to perform their assigned logistic missions varied according to the needs of each component. They were affected and in some cases governed by changing ratios that were continually developing between the requirements for logistic support and the logistic resources available to meet these requirements. In addition, imbalances were generated between the levels of combat and logistic forces during the earlier phases of the buildup. These imbalances inhibited the timely development of the logistic bases and organizations needed to provide optimum support of the combat forces engaged in tactical operations.

(a) The Army, in principle, followed the logistic concepts outlined in the contingency plans by the employment of a logistic command and the establishment of logistic complexes in designated regions of the country. Although the need for a logistic command in Vietnam was first recognized by the former COMUSMACV (General P. D. Harkins) in 1962, the requirement gained significant impetus between August and December 1964, when CINCPAC and the Joint Chiefs of Staff endorsed a renewed USMACV plan. In response to a qualified approval by the Secretary of Defense in February 1965, an advanced party comprised of 34 officers and enlisted men arrived in Vietnam during March to become the nucleus of the logistic command. The command was formally established by USARPAC general order with an effective activation date of 1 April 1965. Additional increments were subsequently approved and deployed during the remainder of that year to fill the authorized levels of a type-B logistic command. Subordinate Army support commands in Da Nang, Qui Nhon, Cam Ranh Bay, and Saigon were formed to operate the "logistic islands" that had been formalized in the contingency plans and during the subsequent planning for the buildup.

(b) The Air Force logistic organization used to support air operations in SE Asia closely paralleled the one envisioned in their contingency plans. The FOB and MOB concept had been put into effect to provide the minimal supply and maintenance functions at the FOBs with heavier backup support from the MOBs located offshore. There was a tendency during the buildup, however, to upgrade the forward bases in Vietnam to the capability of MOBs in response to the demands of their commanders who desired to attain more self-sufficiency in the support of units operating out of their bases. The 2d Air Division continued to operate the in-country air bases under the 13th Air Force until July 1965, at which time it was established as a separate command under USMACV and USPACAF. The 2d Air Division would be further upgraded to the status of a numbered Air Force on 1 April 1966, which completed the overall Air Force logistic command structure for the support of USAF air operations in Vietnam.

(c) The Navy contingency plans did not adequately provide for the logistic organizations that were actually employed to support naval forces in the I CTZ and those elements employed elsewhere in Vietnam and offshore. In the first place, the Navy had not intended to establish a support activity ashore to accomplish the logistic support mission; it had planned to support III MAF forces by LOTS and with their assigned amphibious elements. Secondly, the Navy did not possess the units normally associated with shore-based logistic support activities. The need to form such a support activity in Da Nang resulted from the CINCPAC decision of April 1965 (as amended in July 1965) to assign logistic support responsibility in the I CTZ to the Navy. Logistic support operations in the I CTZ, to include over-the-shore port operations, were initially undertaken in March 1965 by elements of the Seventh Fleet under the specific command of Commander, Task Group (CTG) 76.4. In view of the continued buildup of forces in the area and the need to expand logistic support capabilities, the Chief of Naval Operations (CNO) approved

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on 13 July 1965 the establishment of a naval support activity in Da Nang and made provision for the initial personnel allocations to operate the facility. The Naval Support Activity, Da Nang, became formally established on 15 October 1965 and on that date Task Group 76.4 was inactivated. Naval forces later employed in the southern part of Vietnam received their support from the Naval Support Activity, Saigon, which was established on 17 May 1966. The formation of this activity for all practicable purposes completed the composition of the naval logistic organization in Vietnam.

(d) Logistic support for USMC forces scheduled for possible employment in SE Asia in the contingency plans was to be furnished by logistic elements organic to the III Marine Expeditionary Force (MAF). The plans made no provision, however, for sustained follow-on support from offshore bases once the forces had deployed from their assigned WESTPAC locations. In-country logistic support was furnished throughout most of 1965 by a Force Logistic Support Group (FLSG) in Da Nang, which operated as a subordinate of the 3d Force Service Regiment (FSR) on Okinawa. This logistic organization required expansion and realignment in March 1966 with the arrival of an additional U.S. Marine division. A Force Logistic Command (FLC) was established on 15 March 1966 as a provisional organization under the command of the CG, Fleet Marine Force, Pacific (FMFPAC), and under the operational control of the CG, III MAF. The command consisted of FLSGs in each of the division areas and a Force Logistic Support Unit (FLSU) located at Hue and Phu Bai. Thus, the planned logistic organization was established in the Republic of Vietnam (RVN) for the support of USMC forces and was expanded as appropriate to accommodate the support of additional forces.

d. Deployment of Forces

(1) The conditions outlined in the contingency plans for the deployment of U.S. forces to SE Asia called for rapid movement in order to capitalize on the element of surprise and to ensure continued control over the facilities and geographic areas considered essential to the planned combat operations. The conditions also stipulated that before logistic elements could be moved into the planned areas of operation, tactical elements would need to conduct the combat operations necessary to secure and hold the areas. Thus, the concepts of operation contained in the plans had in fact precluded the advanced preparation of a logistic base or the advanced deployment of logistic elements to the objective area prepared to provide support to the combat forces.

(2) The major U.S. forces were phased to arrive in the objective area under the stipulated conditions of each phase of the plans. The size of these forces ranged from the smaller force, totaling 65,000 personnel, to a larger force of approximately 257,000. The plans called for the delivery of over 50 percent of the force into the objective area during the first 30 days, with the remaining elements phased to arrive in monthly increments that would close the total force by D+180 days. Transportation movement tables were developed in the event the plans were to be implemented as written. Transportation lift restrictions brought about adjustments in the planned deployments by stretching out the movement of the forces in order to fit within the estimated transportation resource capabilities.

(3) As of 1 January 1965 there were over 23,000 U.S. personnel on duty in Vietnam from all the military services. They were represented by Service as follows:

Army	-	14,697
Air Force	-	6,091 (PCS and TDY)
Navy	-	214
Marines	-	900
Total		23,702

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(4) Planning and studies had been accomplished during the periods of late 1964 and early 1965 concerning the possible deployment of additional U.S. and allied forces to SE Asia. Even though initial landings were accomplished during March 1965, the major buildup really got underway as the result of planning conferences hosted by CINCPAC during April 1965. Subsequent conferences were called periodically to review the situation in Vietnam and to recommend the deployment of additional units for the support of operations there. Contrary to the rapid deployment of forces outlined in the contingency plans, actual deployments were to be extended over most of a 5-year period as indicated in Figure 5.

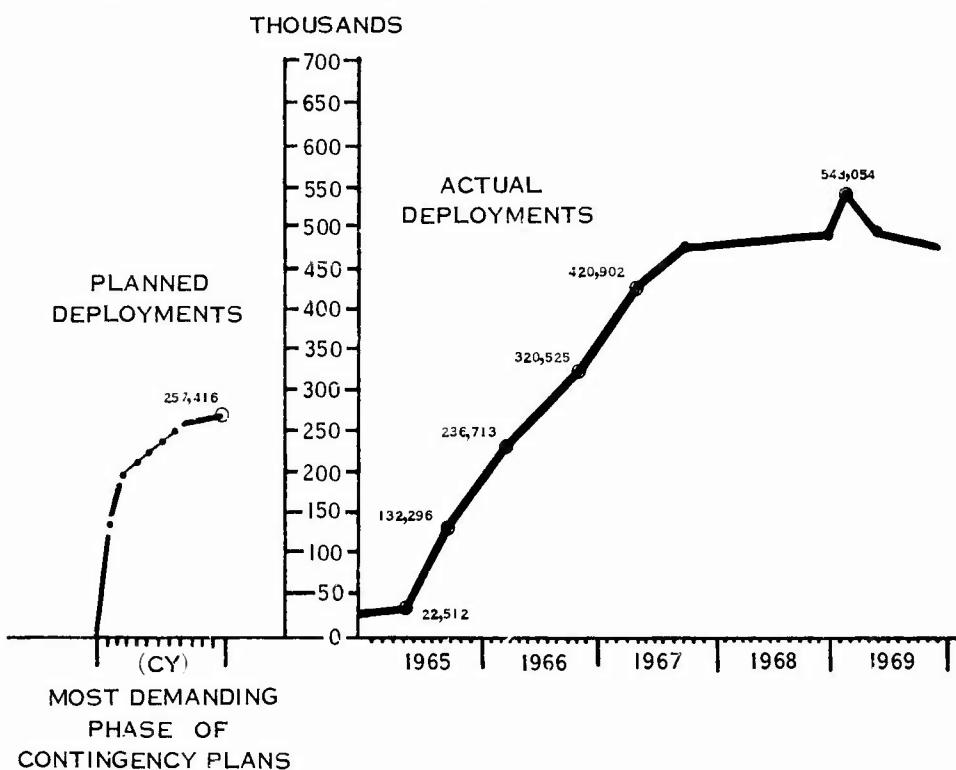


FIGURE 5. COMPARISON OF ACTUAL AND PLANNED
U. S. TRCOP DEPLOYMENTS

(5) As illustrated in Figure 5, approximately two-thirds of the U.S. troop buildup in Vietnam had been completed by the end of 1966; the remaining one-third was carried out during 1967 and 1968. The maximum U.S. troop strength of 543,054 in Vietnam was reached during February 1969. Although the actual deployments appear to have been accomplished on a regular or consistent basis, they were in reality carried out incrementally. Deployments on a decision-by-decision basis generated considerable confusion and delays in logistics planning by the Services for the support of the planned deployments. Comparison of the actual force deployments to Vietnam with those deployments scheduled under the most demanding phase of the contingency plans clearly illustrates a great disparity. Whereas the plans phased the forces into the objective area during the first 180 days, the actual buildup was to continue almost 5 years. Planning for logistic support under these conditions, particularly during the early phases, was extremely difficult because of the inadequate lead time and lack of stability in the planned deployments.

(6) Deployments were carried out in spite of the fact that the mobilization of the Reserve forces was not authorized during the first 3 years of the buildup as had been anticipated. Guidance from the Joint Chiefs of Staff in this area had been based on notification from the Secretary of Defense that he would prepare draft legislation to the Congress requesting the authority for the "necessary mobilization" and the "extension of tours of duty" for military personnel. It was publicly announced on 26 July 1965 that the President had decided against a callup of the

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Reserve forces in connection with the Vietnam conflict. This decision remained in effect until April 1968, at which time a change in policy authorized the Secretary of Defense to order any unit in the Ready Reserve of the armed forces to active duty for a period not to exceed 24 months. The first contingency of Reserve forces called to active duty under this authority was accomplished on 13 May 1968 and totaled only 23,158 personnel for all the Services. The impact of this rather late change of policy on the logistic support posture of forces in Vietnam is not discernible when viewed in terms of the buildup of forces that occurred prior to or subsequent to this change.

e. Base Development

(1) Base development planning for possible contingency operations in SE Asia was comprised of a number of plans, programs, and operational projects that had been undertaken by the military commands and the various U.S. Government agencies. These related to the development of facilities and areas that would have either economic or military significance in the accomplishment of established U.S. goals and objectives for Vietnam. Construction of military bases during this time frame was primarily funded under the existing Military Assistance Programs (MAPs) and was carried out under the sponsorship of the host nation under the concept of "joint usage."

(2) The contingency plans published by the PACOM commands contained general policy guidance that reflected the usual dialogue calling for "austere standards in all undertakings and only the minimum essential construction to support military operations." The local geographic areas were accurately described as primitive and characterized by their lack of logistic support capabilities. Transportation facilities, to include the harbors and port areas, were especially noted for their limitations and lack of adequate facilities to support operations.

(3) The JCS publications in existence during the time that these plans were developed did not contain any standard or suggested format for the preparation of a base development plan. Each military service (and thus its respective component commands in PACOM) was employing different methods and systems to substantiate and justify its construction requirements and its budget. CINCPAC tried to fill the void in July 1965 by the publication of an instruction designed to standardize procedures for identifying base development requirements, reporting existing assets, and identifying deficiencies.² Even though this instruction was not in being in time for use during the preparation of the contingency plans, it did provide a sound basis for managing the base development programs developed during the actual buildup. It also served as a pilot model that was subsequently adopted by the Joint Chiefs of Staff.

(4) The most extensive base development planning conducted specifically for the support of the contingency plans pertaining to SE Asia was accomplished by HQ USARYIS from 1963 to 1965 under the direction of CINCUSARPAC. The base development plan identified significant shortages in construction capability but did not identify a requirement for the construction or installation of deep-draft piers, which would have been required to support those forces planned for deployment. Ultimately, a much-larger-than-planned force was deployed and base requirements were generated far in excess of planned requirements.

(5) CINCPACAF and CINCPACFLT approached their tasks in base development planning in much the same manner. They tasked their subordinates to review existing facilities and determine the need for improvements and additional facilities to support their forces. Although both of their contingency plans made reference to separate base development plans, there is no evidence that such plans were ever published by these commands. It was generally considered that support bases and areas would be utilized as they existed with normal improvements or additions being accomplished after operations got underway.

(6) COMUSMACV gave much more extensive and detailed treatment in his plan concerning the development of facilities for the support of planned operations than did the PACOM

² Commander in Chief, Pacific, Instruction 11010.1C, Base Development Planning, 7 July 1965.

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component commands in their supporting plans. This detail was particularly evident in the area of POL support. His plan contained considerable information relating to the existence of the need for POL handling facilities in the ports, storage areas, airfields and overland transportation systems. It gave a complete listing of all the commercial storage facilities in Vietnam with their rated capacities but went on to say that they were considered both inadequate and dependable to support military requirements. Facility requirements were also listed in the categories of airfields, ports, administrative, maintenance, covered storage, marshalling areas, medical and other associated types of special facilities. The plan also announced the relative construction priorities of the command.

(7) Planning for the construction of the logistic base in Vietnam during the early phases of the buildup was undertaken on much the same basis as the troop deployments, i.e., on an incremental and piecemeal basis. The need for a specific facility or the development of a particular area often resulted from a revision in command concepts or from high-level decisions. Whether the requirement was or was not identified in a contingency plan or a related phase development plan did not appear to have a direct influence on these revisions. For example, the need to develop the Cam Ranh Bay area as a logistic support base had been identified in the plans, but approval for its development did not come in response to COMUSMACV recommendations until May 1965 at a CINCPAC planning conference. This delay in approval meant that development of the logistic base in Vietnam would generally lag behind the arrival of troop units and materiel in the logistic areas. This delay was a major contributor to the problems experienced in receiving, accounting for, and handling supplies in the objective area.

(8) The inadequacy of the logistics base in Vietnam to accept approved troop unit deployments was first experienced in July and August 1964, when additional Special Forces, Army aviation, and Air Force elements were approved for accelerated deployment. COMUSMACV advised CINCPAC and the Joint Chiefs of Staff at that time that he was unable to accept those deployments (approximately 4200 personnel) any quicker than the originally planned 9-month period. This was attributed to the austere characteristics of the area, the inability of the Government of the RVN to provide adequate facilities, and the need to prepare the logistic base that could support the additional forces.

(9) The imbalance of logistic troops to combat forces continued through 1965 and 1966, with COMUSMACV again taking a strong stand against accepting any more combat forces ahead of their required logistic support elements. This appeared to be an outgrowth of the official reluctance and delay at the national levels in the early phases of planning for U.S. combat operations in Vietnam to authorize the deployment of logistic forces and to accomplish selective base development projects to include port facilities. These actions would have enhanced the logistics base capable of receiving and handling the equipment and supplies that were subsequently delivered to the objective area in ever-increasing quantities. The results were delays in off-loading at destination ports and the inadequate accounting for and handling of the materiel discharged and delivered into the supply storage facilities.

4. LOGISTIC APPRAISAL

a. General

(1) Inasmuch as the contingency plans produced by unified commands prior to and after 1 January 1965 were required to be capabilities plans, some degree of logistic appraisal would have been inherent to the planning system that produced the plans. Although there was no established cycle or system for logically appraising these plans, there was a directive requirement in CINCPAC's plan for his component commanders to ascertain logistic feasibility. The component commanders were also directed to submit written statements regarding their findings on logistic feasibility to include the identity and proposed solutions for any significant deficiencies or shortcomings.

(2) Though no specific logistic appraisal statements by the PACOM component commands have been retrieved, it is significant to note that considerable information that identified a number of logistic limitations and constraints was reflected in the plans themselves. The

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proposed area of operation was accurately characterized for its austerity and underdevelopment. The inadequacies of existing port facilities, land lines of communication, POL storage and distribution systems, air facilities, and other types of logistic facilities were discussed in some detail in the plans.

(c) CINCUSARPAC included a feasibility statement in the logistics annex of his plan. This statement concluded that the planned operations were logically supportable provided the deployment dates identified for the types and numbers of combat service support units to be furnished from CONUS (as was listed in Annex A of his plan) could be met. Neither the CINCPACAF nor the CINCPACFLT plans contained any specific statements concerning overall logistic feasibility; however, the mere fact that they had been required to prepare capability plans would suggest that they considered their respective published plans and those of their subordinates to be logically feasible.

b. Feasibility of Plans

(1) As the military situation continued to deteriorate in Vietnam and infiltration of the country by North Vietnamese forces became more pronounced, CINCPAC and his subordinate commands undertook a series of reviews to update and to reaffirm the status of their forces and logistic posture. They began to look again at the construction projects that were in process within the country and that would enhance improvements to the logistic base to see if either upgrading on the assigned priorities or on the level of command attention were warranted. These reviews culminated in an appraisal report to the Joint Chiefs of Staff in January 1965. This report was used as the basis for an appraisal by the Joint Chiefs of Staff, which was submitted to the Secretary of Defense on 11 February 1965.

(2) The major logistic shortfalls that existed in the plans and the proposed areas of operation were identified. They were summarized as follows:

(a) Augmentation of the strategic airlift required to meet force deployment schedules would necessitate activation of the Civil Reserve Air Fleet (CRAF).

(b) All the sealift capabilities of the Military Sea Transport Service (MSTS) would be required, plus approximately 50 percent of the existing U.S. Merchant Marine fleet.

(c) POL stocks and handling facilities were extremely limited and would need to be expanded.

(d) The engineer construction forces were inadequate to accomplish the necessary construction projects to provide the logistic base required for the support of planned operations.

(e) Some Army Reserve combat service support units were considered incapable of meeting their scheduled deployment dates.

(3) CINCPAC had also determined that all the Services had sufficient materiel pre-positioned in the theater to support PACOM-assigned forces under the most demanding phase of the contingency plans for the first 60 days of operation. Separate arrangements were underway for the follow-on support of forces planned for deployment as augmentation forces from the CONUS base.

c. Requirement for Appraisal. At a conference held on 18 February 1965, the Department of Defense (DOD) and the Joint Chiefs of Staff formally announced the requirement for a complete review and analysis of the existing contingency plans pertaining to Vietnam in order to determine the capabilities for their implementation if ordered to do so. This review was to include all facets of logistic support, both in-country and from CONUS, for the specific logistic functional areas listed in the DOD directive. Thus, probably one of the most complete and thorough logistic appraisals ever completed on the contingency plans of a unified commander was begun. Inputs were received from CINCPAC, the military services, and other Government

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agencies by the Joint Chiefs of Staff, who forwarded a consolidated report to the Secretary of Defense on 12 March 1965.

d. Feasibility Determinations

(1) The element of strategic mobility was identified as the principal limiting factor of the contingency plans; thus, it was a matter of primary consideration for appraisal. It was concluded that the forces could be moved to the objective area during the times specified in the movement schedules, providing certain qualifying actions were undertaken. These qualifying actions included activating the CRAF; requisitioning U.S.-flag commercial passenger, cargo, and tanker ships; and obtaining priority on the use of railway equipment on the U.S. railroads.

(2) The ability to unload and support the deployments in the objective area was also identified as a limiting factor, in view of the austere and underdeveloped characteristics of the planned areas of operation as well as the known capabilities of the enemy to attack and disrupt logistic installations. Pre-positioning of Army lighterage and the activation of MSTS landing ship, tanks (LSTs) were proposed to overcome these limitations. It is significant to note here that the question of building or installing deep-draft piers in the port areas was neither identified nor addressed. It should also be observed that the courses of action proposed to overcome the recognized deficiencies in port capabilities would not in fact be an effective cure.

(3) The Joint Chiefs of Staff reached the overall conclusion that supportability of the contingency plans was contingent upon the limitations identified and the proposed courses of action to overcome them.

(4) Other major limiting, but not disqualifying, logistic deficiencies were identified in the appraisal report. Cognizance should be taken of the fact that none of them were new, since they had all been fully documented in the contingency plans or during the previous PACOM feasibility appraisals. They were summarized as:

(a) The roadnet in Vietnam was considered inadequate to support U.S. military operations.

(b) The existing in-country logistic base was inadequate to allow the necessary expansion for the support of U.S. forces.

(c) A significant increase in POL storage and distribution capabilities in the objective area would be needed to sustain planned operations.

(d) Transportation deficiencies in-theater included limited facilities for coastal shuttle, port lighterage, and clearance of cargo from the aerial and water ports.

(5) Although not identified as limiting or disqualifying in nature, many other actions were proposed in the report to enhance the readiness of forces and to sustain support of combat operations. They did serve to effectively bridge the contingency plans with the action subsequently undertaken in connection with the actual buildup of U.S. forces in Vietnam.

5. LOGISTIC SUPPORT ACTIVITIES

a. Supply and Materiel

(1) The supply systems of the military services had been developed and refined until they had become highly routinized by regulations and standard operating procedures. Indications were that these systems had been extended into the overseas areas and applied to the needs of the commands there through coordination with the Service component commands of the unified commanders. In the area of contingency planning, therefore, the planners listed or referenced existing policy and procedure documents rather than repeating such detailed information in each of their plans. Such references were used extensively by CINCPAC and his component

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commands in the area of supply and materiel support during preparation of their contingency plans relating to possible operations in SE Asia.

(2) The contingency plans produced by CINCPAC, his component commanders, and COMUSMACV were based on the principle that his components had primary responsibility for the supply support of their forces and that COMUSMACV would exercise overall coordination of this function in the objective area. The component commands had the continuing responsibility for providing those supplies that were peculiar to their respective Services and for the supply of common items during the first 180 days of the planned operation. The concept called for a single component of USMACV (the Army) to assume this role for all U.S. and designated allied forces in the objective area commencing on D+180 days in accordance with the stated requirements of the other components. The plans made similar arrangements for the computation and submission of requirements for POL support to COMUSMACV.

(3) CINCPAC decisions announced in April and July of 1965 would realign the responsibilities for common item supply and for POL by tasking his Navy component commander to furnish this support in the I CTZ and the Army to perform these functions in the other CTZs. The Air Force component commander would also assume these responsibilities for forces located on the USAF FOBs or MOBs. It has been considered that the affected commands would have been in a much better position to furnish this support if this tasking had been accomplished in the contingency plans or prior to the end of 1964.

(4) The contingency plans further provided for units to deploy with specified levels of organic support capability until the resupply system from CONUS could become effective in the objective area. The Services would automatically resupply these units until normal requisitioning procedures could be implemented. CINCPAC directed that normal requisitioning procedures be accomplished as early as practicable. Each of the military services initiated a type of "push" system early during the buildup phase to provide automatic resupply for their forces. Adjustments were made periodically in the types and quantities of materiel supplied by these systems as the situation warranted. These push systems, coupled with established priority movement systems to expedite the delivery of materiel to the objective area, would jointly serve to meet the supply needs of U.S. and allied forces employed in Vietnam. Consequently, none of the supply shortages that were reported by COMUSMACV during the buildup was identified as critical to the execution of combat operations.

(5) Adequate support for U.S. forces was also borne out by the functioning of the DOD Vietnam Expediting Task Force (VETF), which was established in August 1965 to advise the Secretary of Defense on any shortages of materiel or equipment that would seriously degrade our capability to properly prosecute military operations in SE Asia. During its tenure, reports were handled on such items as voice security equipment, POL pipelines, radios, DeLong piers, helicopters, combat uniforms, construction funds, and integrated wideband communication systems. The task force was disestablished on 15 August 1966 upon the recommendation of COMUSMACV and the endorsement of CINCPAC and the Joint Chiefs of Staff on the basis that the logistic systems had been established to adequately meet the needs of his command, thereby eliminating the need for the special reporting and actions.

(6) The contingency plans contained extensive criteria and planning factors that should have aided the military services in determining the supply and materiel requirements to support their respective forces planned for deployment under each phase of the plans. This task became extremely complicated during the buildup, however, because of difficulties experienced by the logistic planners in identifying the forces to be deployed within any given time frame. This complication was partly because of the classification assigned to troop deployment decisions; i.e., planning personnel did not always have access to current information on approved deployment programs. The incremental and piecemeal processing of requirements for troop units originating in the field, coupled with adjustments resulting from high-level reviews and the decisionmaking process, produced an inordinate degree of instability in the lists of units scheduled for deployment. These continually changing force deployment lists were not conducive to either efficient or realistic determination of the logistic requirements for support of approved forces in the objective area.

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(7) By February 1969 the actual U.S. troop deployments to Vietnam were more than double the size of the force envisioned under the most demanding phase of the contingency plans. Constraints on the activation of the Reserve components necessitated the formation of many military organizations to meet the force requirements of the buildup. The industrial base in the United States also had to be expanded in order to keep pace with the additional materiel requirements generated by the escalation of military operations in Vietnam. Both private and Government-owned sectors of the industrial base experienced difficulties in transition from the relatively limited and constrained peacetime status to the capability of meeting the ever-increasing demands of military combat operations. These transition difficulties suggest that stable and reliable guidance and procedures are needed to accomplish the type of industrial mobilization production planning that will complement the contingency planning performed by the commanders of unified commands and the military services. The industrial base should be capable of responding on short notice to the logistic requirements of a variety of military contingencies on both a short- or long-term (see Chapter VII, Industrial Mobilization Production Planning).

(8) The requirement to pre-position materiel within PACOM for the support of possible contingency operations was specifically addressed in the plans pertaining to Vietnam. Each of the PACOM Service components had initiated actions in support of its plans to enhance its logistic capabilities posture. These efforts became the subject of special study by CINCPAC in March 1965 in an effort to ascertain the adequacy of the pre-stock policies and objectives of his components. The study concluded that these policies were adequate to support existing contingency plans within the command. It also determined that the Services had sufficient materiel pre-positioned in the theater to provide logistic support of PACOM forces for the most demanding plan during the first 60 days of hostilities. Efforts were underway to pre-stock materiel for augmentation forces as capabilities would permit.

(9) One of the most significant omissions or failures of the plans to recognize the materiel requirements for the support of planned operations in Vietnam was related to the development of adequate port facilities. Both the contingency plans and the logistic appraisal of these plans by the Joint Chiefs of Staff addressed the need to improve the port facilities in the objective area. They did not, however, identify the specific requirements for the construction or installation of deep-draft pier facilities at the proposed port locations. Neither did the related base development plans. Requirements for portable pier units were not transmitted through the supply channels until October 1965, at which time the Army (Army Materiel Command) negotiated contractual arrangements with the DeLong Corporation to build prefabricated piers for installation at designated port areas in Vietnam. The belated recognition of this requirement also delayed the development of port facilities that were able to receive and handle the materiel being shipped from CONUS during the early phases of the buildup.

b. Transportation

(1) The overall guidance and direction contained in the contingency plans on transportation support provided an adequate basis for determining lift requirements and for identifying the problem areas or limitations that would be encountered if the plans were implemented. The tasks assigned by CINCPAC to his subordinate commands generally conformed to the normal roles and missions assigned to the military services, possibly with the exception of the assigned responsibilities for the establishment and operation of ports and beaches in the objective area. This assignment would require clarification during the early phases of the buildup.

(2) The transportation lift requirements (both airlift and sealift) to deploy the CONUS-based forces and their follow-on logistic support were fully developed by the component commands as directed and were consolidated by CINCPAC in his transportation requirements tables, which were published in September 1964. These tables reflected the weight and cubic content of the organic equipment and supplies of the listed units and of their estimated follow-on supply requirements. They were used by CINCPAC and CINCSTRIKE, together with other commands and agencies, to prepare movement schedules that related the lift requirements of the plans to estimated air and sea transportation capabilities. The preparation of movement schedules was accomplished during December 1964 and resulted in the identification of certain

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shortfalls in the strategic lift capabilities for meeting the desired phasing and closing dates of units as listed in the contingency plans. Adjustments were made in the phasing to bring the stated requirements in line with estimated lift capabilities, which included stretching out the planned phasing of units.

(3) Transportation capabilities were also included in the logistic appraisal conducted on the contingency plans as a matter of major concern. As previously noted, the element of strategic mobility was singled out as the principal limiting factor. Courses of action were also proposed with the objective of satisfactorily reducing or eliminating the limiting aspects of the strategic transportation system and thereby improving the logistic feasibility of the plans. The limiting factors, both in the strategic lift and the in-country transportation systems, had already been accurately identified and assessed in the plans in terms of the impact that each limitation was expected to have on getting the forces to the objective area and sustaining them there.

(4) The adopted logistic concepts of operation had identified air transportation within the objective area as the primary means of lift until surface lines of communication could become operational. Even then, primary reliance would continue to be placed upon air transport and coastal shuttles to effect movements between the planned logistic complexes. Railway and inland waterway systems were characterized by their limited area coverage and susceptibility to disruption by enemy action. Both systems were, therefore, discounted in the plans as a significant means of supporting U.S. forces operating in the objective area. Pipelines were known to be nonexistent, except for those being used for local area distribution; therefore, such facilities would have to be installed as needed to support operations. The existing highway nets were also accurately described as being limited both in terms of area coverage and capacity. Except for some geographic areas where truck convoys became operational, highway transport was properly expected to be confined to local hauls within the various logistic support areas.

(5) Although COMUSMACV was assigned the task in the plans to coordinate and control in-country logistic support, which included utilization of the interior lines of communication, no provision had been made for the central control of movements within the objective area. On 15 October 1965 the Traffic Management Agency became established under USMACV to direct, manage, and supervise the movement of personnel and supplies within the country. This agency was also designated to act as a central point of contact within USMACV with other commands and transportation agencies in connection with the transportation support of U.S. operations in Vietnam.

(6) The establishment, development, and operation of seaports and beaches in support of possible contingency operations in Vietnam had been the object of many surveys, evaluations, assessments, and, in some instances, criticism. The need for adequate port facilities was recognized early in the planning process and had been the subject of special analysis and study. The inadequacies of the existing austere and underdeveloped ports in Vietnam were accurately described in the contingency plans and during the logistic appraisal of the plans sponsored by the Joint Chiefs of Staff. In spite of this knowledge, however, one of the major problems encountered in connection with the buildup of U.S. and allied forces in Vietnam resulted from inadequate throughput capability of the logistic bases, of which the ports were integral parts.

(7) The CINCPAC contingency plan identified Saigon as the major port in Vietnam and designated Ba Ngai (Cam Ranh Bay), Da Nang, Nha Trang, and Qui Nhon as minor ports. COMUSMACV was tasked to operate the port of Saigon through his Army component commander and the minor ports and beaches through his naval component commander. It was further specified that, as major ports of entry were established, Army elements would take over their operation. This tasking appears to be in conflict with the normal roles and missions assigned to the Services. A DOD memorandum assigned the responsibility to provide land transportation services (to include operation of seaports) in the overseas areas to the Secretary of the Army.³ The basis for this tasking by CINCPAC in his contingency plan is not clear, nor was there any indication

³ Department of Defense Memorandum 4500.2 subject: Land Transportation in Overseas Areas, 17 August 1954.

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that the assignment of these responsibilities for port operation in Vietnam was challenged by any of the component commands or military services.

(8) The supporting plans of the PACOM component and subordinate commands further complicated this tasking by the application of varying interpretations of both its meaning and what were considered appropriate methods for accomplishment. Planning was generally pointed in the direction of using amphibious elements and lighterage for operations in these undeveloped port areas. None of the plans made provision for the construction or installation of deep-draft pier facilities in the designated port areas. Base development plans prepared by the Army component command concluded that the capacities of the identified ports were sufficient to handle the tonnages assumed to be programmed for clearance through each of them. However, these plans considered that expeditious rehabilitation would be imperative to ensure continuous support of U.S. military operations in the area on a sustained basis.

(9) Clarifying guidance was issued by CINCPAC in April and July 1965 by assigning responsibility for the operation of ports and beaches in the I CTZ to his naval component commander and the remainder of the ports and beaches in South Vietnam to the Army component commander. This directive served to clear up some of the misunderstandings and misconceptions that had been generated within the command. It also served to relate provisions of the contingency plans to the actual operations being undertaken during the early phases of the buildup.

c Communications

(1) The multifarious communications network and organizational structure located within the PACOM area provided a broad-based environment within which to develop the communications portions of the contingency plans. Each of the component commands had established and was operating communications systems in SE Asia in support of its forces and to other forces as had been specified in negotiated interservice agreements. The Defense Communications Agency (DCA) had undertaken, in accordance with DOD directives, the task of exercising operational direction and management control over the departmental (military) elements functioning as part of the Defense Communications System (DCS). Its mission was to ensure that the communications needs of the DOD and other Government agencies would be met.

(2) CINCPAC tasked each of his component commanders to provide or arrange, through his respective Service, for the necessary communications personnel and equipment to meet the expanded communications requirements of forces in the event contingency operations were to be undertaken. Coordination of the in-country communications functions was assigned to COMUSMACV. The communications-electronics portions of the plans contained considerable detail on existing communications systems in the various possible objective areas and the additional communications-electronic requirements under each phase of the plans. These compilations of on-hand and required equipment reflected concurrent and joint planning by CINCPAC and his subordinates in the area of communications support.

(3) In spite of these efforts, however, problems were encountered in the timely expansion of the communications systems in order to keep pace with the U.S. troop buildup. They were also experienced in the area of the communications organizations that evolved during this time frame. Expansion of the communications networks proceeded on a case-by-case basis, each requirement being treated essentially as a new requirement for DOD approval and funding purposes. This treatment contributed to the fact that expansion continually lagged behind the requirements being generated by the introduction of additional forces into the objective area. The control of combat operations and the attendant logistic support became hampered in some instances by inadequacies in communications support, particularly during the early phases of the conflict.

(4) The contingency plans were based upon each Service and component providing its own communications support and organization in the objective area. No provision was made, however, for an integrated or joint organization, except as might be contained in the tasking by CINCPAC that COMUSMACV would provide the necessary in-country coordination and control.

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In spite of continuing efforts to expand communications capabilities in the objective area in consort with the changing U.S. military mission and the buildup of U.S. forces, a noticeable decrease was being observed by COMUSMACV in the reliability of the long lines of communications system supporting Vietnam. This decreasing reliability was partly attributed to technical problems inherent within the system; but it was regarded by COMUSMACV as being primarily due to the fact that there was no single directive authority in the objective area for the entire communications system. Consequently, in the fall of 1965 COMUSMACV declared to the Chief of Staff, Army, that he could no longer tolerate the separate communications organizations located within the country over which he had no direct command control or authority. Although courses of action were to be undertaken during November and December of 1965 to adjust the communications organizational structure to the satisfaction of COMUSMACV, expansion of the in-country systems continued to lag behind stated requirements well into 1966. These expansions did not keep pace with either the troop buildup or the improvements that were subsequently achieved in the organizational or management structure.

d. Hospitalization

(1) As had become customary in other areas of logistic support, CINCPAC tasked his component commanders in his contingency plan to be responsible for the medical support of their respective forces and to be prepared as directed to provide emergency support for allied and designated civilian personnel. This support was to be furnished under the concept that medical units organic to the forces would provide forward area first-aid, emergency and lifesaving treatment and would clear patients to U.S. medical facilities that were to be established within the area of operations. Evacuation of patients to offshore medical facilities or directly to CONUS would be accomplished in accordance with established command evacuation policies and the needs of the individual patients.

(2) The rigors of combat plus the unsatisfactory health and sanitary conditions in the objective area were expected to impose stringent and abnormal requirements on all supporting medical units and facilities. These conditions required strict preventive medicine discipline peculiar to the objective area prior to the deployment of units from PACOM or CONUS and required continued command attention within the units after their arrival.

(3) The medical concept outlined in the plans called for medical support to authorized personnel on an area basis that utilized the organic medical elements of the units to be located within each of the geographic areas. Except for these more permanent facilities already established in Vietnam, it was considered that medical support would be provided by the field medical service units to be deployed with the forces from PACOM bases and CONUS. The Army base development plans specified that the construction of medical facilities in the objective area would not exceed standard-four, minimum-essential levels. If the situation became stabilized, however, medical facilities would be improved as appropriate to provide better capabilities. Field, evacuation, holding, and mobile army surgical hospital (MASH) facilities were planned for location in Saigon, Nha Trang, Qui Nhon, Da Nang, and Pleiku. Base dispensaries, medical clinics, and similar facilities were to be located elsewhere in the country as needed.

(4) The communications zone or more permanent facilities were to be located within the offshore commands in the Philippines and on Guam, Okinawa, and Japan. This plan would be accomplished by expanding existing facilities and constructing additional hospitals in accordance with the phased requirements of the plans and in consort with the announced command evacuation policies.

(5) The medical evaluation system established for the support of operations in Vietnam in early 1965 was based on a 30-day evacuation policy prescribed by COMUSMACV with the approval of CINCPAC. Doctors at the hospitals in Vietnam initially decided whether a patient would be treated locally or would be evacuated to an out-of-country hospital. Approximately 70 percent of all patients admitted to hospitals in Vietnam were treated and returned to their units. The remaining 30 percent were evacuated to offshore hospitals, either within PACOM or in CONUS, as designated by the PACOM medical regulating offices located within the medical evacuation system. Approximately 78 percent of all the patients received at the offshore hospital

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facilities were further evacuated to facilities in CONUS in accordance with the 60-day theater evacuation policy. The normal flow for medical evacuees and the experienced average patient dispositions are illustrated in Figures 6 and 7.

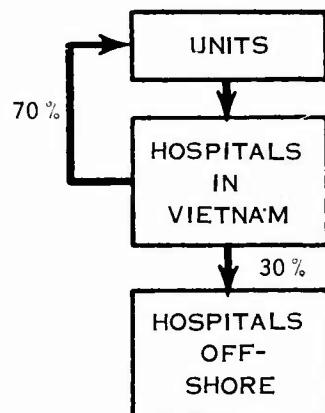


FIGURE 6. DISPOSITION OF PATIENTS ADMITTED TO HOSPITALS IN VIETNAM

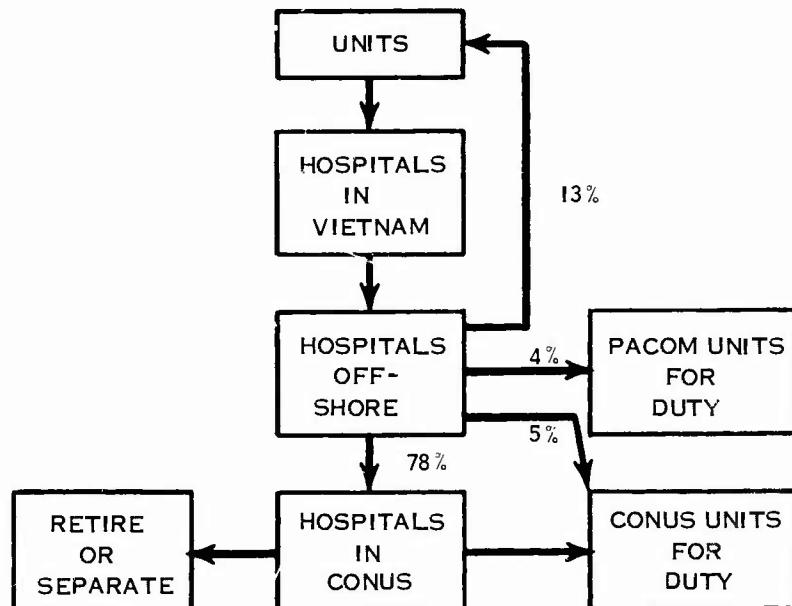


FIGURE 7. EVACUATION FLOW AND AVERAGE DISPOSITIONS OF PATIENTS

(6) The planning factors used by the Services and the PACOM component commands in preparing their estimates of hospital bed requirements for both in-country and offshore hospitals were based on the most demanding phases of the contingency plans and the experiences in previous wars. Adequate experience data had not been previously developed or identified for expected battle casualties engaged in counterinsurgency operations within an environment similar to that encountered in Vietnam. The lack of data necessitated continual reevaluation of the planning factors being used in order to keep bed-requirement estimates reasonably in line with the actual and anticipated experiences of our forces in Vietnam. Accurate estimates were extremely important, not only to ensure that adequate hospital facilities would be available to meet the requirements but also to prevent wasteful expansion or construction of medical facilities not needed.

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(7) The expected hospital admission rates for the forces of all the Services were initially established as 3.3 patients per 1000 personnel employed in the area per day. This rate was in effect during October 1965 and was being used in developing plans for additional medical facilities to support operations in SE Asia. Periodic reappraisals of actual admission and disposition data by the concerned commands and agencies resulted in a continually reducing trend of the admission rate expectations for future periods. In addition to the decreasing admission rates, the length of in-country hospital confinement decreased because of the following factors:

- (a) The effective use of the helicopter for battlefield evacuation
- (b) More extensive use of jet aircraft for medical evacuation
- (c) Improved medical treatment techniques and equipment.

TABLE I
EXPECTED HOSPITAL ADMISSION RATES IN VIETNAM

Service	Oct. 65	Jan. 66	Apr. 66	May 66	Oct. 66	Oct. 67
Army	3.30	2.00	1.60	1.07	1.07	0.92
Air Force	3.30	0.41	0.41	0.41	0.41	0.41
Navy	3.30	1.80	1.80	1.80	1.11	1.00

(8) The expected hospital admission rates were tied directly to either actual or anticipated troop strengths in the objective area. Troop strengths would then generate either battle or nonbattle casualties, which would make up the larger majority of personnel requiring treatment in the hospitals. Comparison of troop strengths in Vietnam (Figure 8) with casualty statistics (Figure 9) during a 2-year period, however, indicates that casualty rates were not a direct function of troop strengths. Comparative analysis of the troop strength levels and the experienced casualty rates during the same periods would suggest that the casualties experienced by U.S. forces in Vietnam were a function of predominant factors other than in-country troop levels. The types of tactics used and the environment would appear to be the more influential considerations.

(9) As a result of reduced casualties, hospital admissions, and hospital bed requirements, offshore hospital construction requirements were reduced considerably. As shown in Table 2, the total offshore hospital bed requirements were reduced between October 1965 and November 1967 by a total of over 14,000 beds. Some of these reductions were accomplished prior to actual funding or construction planning. Specific reductions that represented substantial dollar savings in funded programs were made in Japan and on Guam, however. The Army curtailed the second 1000-bed increments planned for Camp Oji and Camp Drake and the 1200-bed facility for Tokorazawa in Japan. The Navy deleted 700 beds planned for Subic Bay in the Philippines and 500 of the 900 beds programmed for Guam. Cancellation of these specific bed requirements constituted a reported savings in construction funds of approximately \$6.3 million. This suggests that more accurate medical planning factors are needed for use in contingency plans involving U.S. forces engaged in combat operations similar to those experienced in Vietnam.

(10) Although hospitalization support to civilians and noncombatants had been included in the contingency plans as a "be prepared when directed" task to the PACOM component commands, indications were that little or no actual preparations had been undertaken by the components to provide either the medical units or the facilities necessary for such support. Since the beginning of the war, the U.S. medical facilities in Vietnam had been accepting limited numbers of Vietnamese civilians (which included war casualties) on an emergency basis and as their capabilities permitted. These actions, however, were little more than tokens of humane treatment and civic response.

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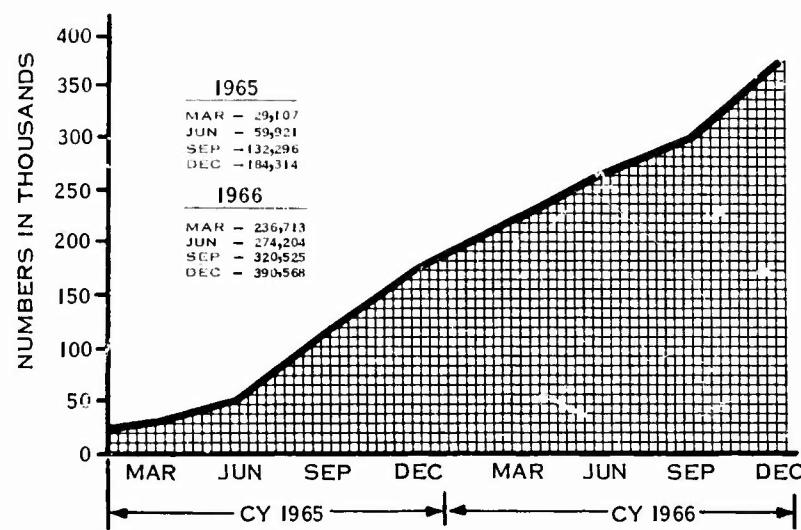


FIGURE 8. U.S. TROOP STRENGTHS IN VIETNAM
DURING YEARS 1965 AND 1966

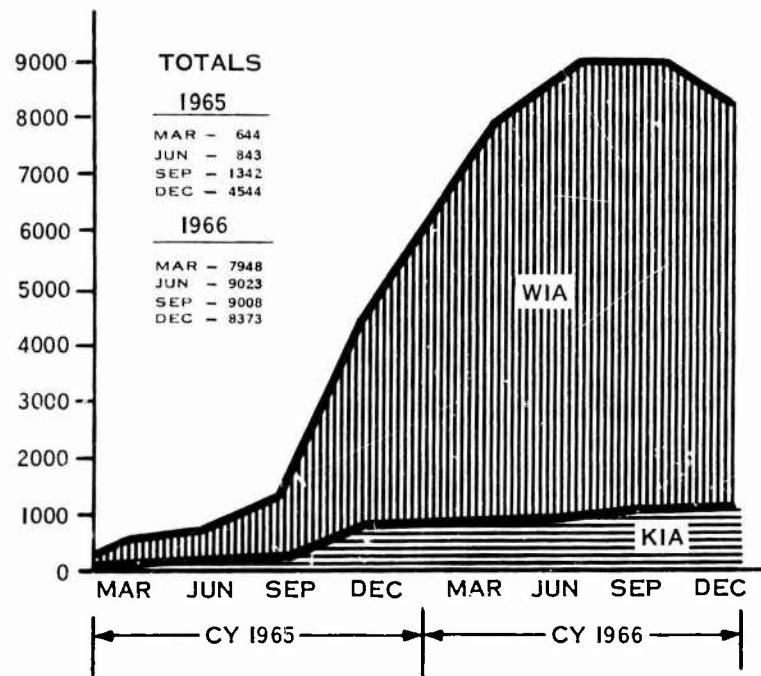


FIGURE 9. U.S. CASUALTIES IN VIETNAM (WIA & KIA)
FOR YEARS 1965 AND 1966

TABLE 2
OFFSHORE HOSPITAL BED REQUIREMENTS

Service	Oct. 65	June 66	Sep. 66	Nov. 67	Net Reductions
Army	13,500	7,225	4,450	3,068	(10,432)
Air Force	450	450	450	450	0
Navy	5,243	3,861	1,542	1,392	(3,851)
Total	19,193	11,536	6,372	4,910	(14,283)

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(11) Plans and the approval for the construction of medical facilities in Vietnam to provide needed medical treatment to civilians would not come about until April and May of 1967, at which time approval was granted by the Secretary of Defense. It was significant to note that, although both COMUSMACV and CINCPAC were on record with the position that funds were not available within either command to meet this requirement if ordered to implement, approval of the civilian hospitalization plans by the Secretary of Defense on 19 April 1967 required reprogramming of approximately \$7.3 million to meet this requirement and did not grant additional funds from DOD sources. It is apparent, therefore, that contingency plans should be more specific about the scale of medical support that is to be provided from military resources.

e. Support to Allied Forces

(1) The contingency plans published by CINCPAC and his component commands were unilaterally designed and pertained primarily to the tactical employment and logistic support of U.S. forces. The plans did, however, identify the possible need of equipping and resupplying allied forces from U.S. resources in accordance with the authorization and direction to be received from higher authority.

(2) CINCPAC directed the Chief, Military Advisory and Assistance Group (CHMAAG), for Vietnam to assist in arranging for logistic support to in-country friendly allied forces by co-ordinating the requirement for and the issue of U.S. military equipment and supplies. He was also tasked to influence the development of indigenous military concepts and plans that would further the capability of in-country forces to provide for their own logistic support. The PACOM component commands were made responsible for providing assistance when directed in support of their counterpart components of allied forces. This assistance included developing lists of major end items of equipment that these forces would require if the plans were implemented. They were also asked to arrange for and furnish the major end items, including weapons and weapons systems, that were recognized as required by the allied forces but would not be included in the existing Military Assistance Program (MAP). COMUSMACV was directed in his normal command role to effect overall coordination of logistic support matters pertaining to the operation of friendly military forces within the country.

(3) Although CINCPAC had issued the necessary instructions in his contingency plan for equipping and continued logistic support of all allied forces employed in Vietnam, it is evident that these tasks were oriented primarily toward the support of the Vietnam Armed Forces. Neither the identity of other prospective donor nations nor the composition of their forces was made known to the component commands in the plan. Related SEATO contingency plans would have been consulted in this instance to ascertain the planned commitment of forces from other member nations and the specific arrangements made in those plans for their logistic support.

(4) The policy and planning guidance outlined in the plans for the support of allied forces was based on several basic assumptions. These assumptions were used so that some form of logistic planning could be undertaken without benefit of the legal actions or governmental guidance that would have to precede the actual furnishing of such support once operations got underway. The principal assumptions used were:

(a) Logistic support for allied forces employed in SE Asia would be both authorized and directed by U.S. national authorities.

(b) Allied forces would provide items of equipment and support considered peculiar to their respective military services.

(c) MAP-supported forces employed in the objective area would, after deployment of sizable U.S. forces, be based on the same logistic pipeline that would support the U.S. forces.

(5) Review of the significant events that occurred during the troop buildup in Vietnam suggests that these assumptions had been properly applied in the contingency plans. Logistic support was already being furnished to all participating forces under established MAP

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programs, with the exception of the Australian and New Zealand forces that represented approximately 10 percent of the total third-country forces committed to operations in Vietnam. Negotiations with prospective donor nations invariably included the question of re-equipping the forces prior to their deployment to Vietnam. Re-equipping was accomplished to varying degrees dependent on the relative needs of each allied force to give them the organic capability of conducting sustained combat operations. Republic of Korea forces, which numerically made up the majority of third-country allied forces, generally deployed with the equipment that had been furnished under the MAP program in accordance with negotiated agreements between the two Governments. Some equipment was replaced after arrival of the elements in Vietnam in order to improve operating capabilities or to achieve compatibility with the established U.S. logistic support systems.

(6) Logistic support of designated allied forces continued to function through the normal MAP channels throughout the year 1965. In May 1965 the Secretary of Defense requested a review and analysis of the demands that were likely to be placed on the U.S. logistics system by allied forces. He was particularly interested in identifying the current and planned levels of support, their ability to increase self-support, and the estimated costs of such support. CINCPAC responded that most of the desired information had already been developed and was included in a MAP plan forwarded to the Joint Chiefs of Staff early in June 1965. This response suggested that the funding and materiel requirements for the support of allied forces had already been addressed by the Command in some detail.

(7) A special study conducted by an Army-sponsored team in August 1965 concluded that the MAP system had up until that time been adequately providing the funds and support needed for designated third-country forces employed in Vietnam. It pointed out, however, that this system would become inadequate with increased participation by allied forces. These inadequacies were also predicted in the contingency plans. The study recommended that the necessary plans be developed as a matter of urgency to bring about the termination of the MAP system for forces engaged in Vietnam in the event that a large-scale escalation occurred. CINCPACFLT confirmed this requirement at about the same time, when he advised CINCPAC that it had become apparent that the component commands had in fact been tasked to support their counterpart allied forces in Vietnam, but that the detailed funding channels and budget procedures were not clear and had not been properly addressed.

(8) In response to recommendations from CINCPAC and the Joint Chiefs of Staff, the Secretary of Defense recommended to the President on 3 December 1965 that military assistance to a country at war (such as Vietnam) be shifted from the normal peacetime arrangements to the regular budget of the Department of Defense. Upon receipt of Presidential approval and direction from the Secretary of Defense, the Joint Chiefs of Staff issued guidance on 25 April 1966 to implement this significant change in logistics funding policy.⁴ Thus, the assumption concerning the possible discontinuation of the MAP systems for forces engaged in combat operations in Vietnam had become a reality.

(9) Logistics planning for the support of allied forces was handicapped during the early phases of the buildup owing to the lack of standardized policies or instructions. This situation had partially resulted from the separate negotiations carried out with each of the governments of the prospective donor nations. Although the contingency plans had contained additional guidance and conditions pertaining to allied support from U.S. resources, they were no longer being used or followed as governing criteria. In any event, clarification of these policies, requested and issued during August 1965,⁵ provided for the following:

(a) Allied units would possess their initial equipment, as authorized by tables of organization and equipment, at the time of their deployment to Vietnam.

⁴Joint Chiefs of Staff, Memorandum 352-66, subject: Transfer of Responsibility for Support of Allied Forces in Vietnam (U), 25 April 1966 (TOP SECRET).

⁵Commander, U.S. Military Assistance Command, Vietnam, Command History, 1965 (U), 20 April 1966, p. 376 (TOP SECRET).

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(b) These forces would make maximum use of their own internal logistic support systems and would provide their own support to the extent of their capabilities.

(c) Backup logistic support would be obtained from the U.S. logistic system in accordance with negotiated agreements.

(10) The logistic support of allied forces engaged in operations in Vietnam has highlighted the fact that the U.S. should make provision in its contingency plans for supply and equipment support to the military forces of most host nations, particularly those in the relatively underdeveloped areas of the world, such as SE Asia. Planning should include the recognition for some equipment exchange or modernization in order to ensure support compatibility with the U.S. logistic system and to enhance the capabilities of the allied forces to conduct sustained combat operations. Procedural guidance should also be included for the interfacing and coordination of the logistic organizations of the allied forces with those to be operated by participating U.S. forces.

6. SUMMARY

a. The review of the contingency plans that had been prepared for possible U.S. military operations in SE Asia prior to the Vietnam era (1 January 1965) was undertaken within the context of the planning function. This review was to ascertain the validity and completeness of the plans produced by the then-existing planning system and to assess the impact of these plans on the planning that was subsequently accomplished in connection with the buildup of U.S. and allied forces in Vietnam.

b. Review and analysis of the plans and their relationship to the buildup revealed that, while some shortcomings were identified "after the fact" in the plans, they were generally very thorough and complete. All the principal plans had either been republished or updated between 1964 and early 1965. These plans contained logistic annexes that outlined the logistic concepts, policy guidance, and tasks for possible implementation by the subordinate commands. This review confirmed that the unified command and military service planning system functioned as designed during this period.

c. The validity of these contingency plans underwent the test during February 1965, when a complete logistic appraisal was accomplished by the PACOM commands and the military services under the direction of the Joint Chiefs of Staff. Although constraints and deficiencies were identified in the plans, it is significant to note that none of them was considered as disqualifying in nature. In fact, alternative courses of action were included in each instance to either negate or reduce the constraint to acceptable levels. It could be concluded, therefore, that these contingency plans were in fact capability plans, as they had been designed and required to be.

d. Problems were encountered during the buildup of U.S. forces in Vietnam in the areas of port capabilities, transportation movement control, construction, communications, and the identification of materiel requirements to support impending operations. The existence of these problems had been for the most part identified and highlighted in the contingency plans or during the logistic appraisal of the plans as anticipated deficiencies in logistic support capabilities. The problems experienced in these areas during the buildup, therefore, were more often attributed to either a lack of positive actions or timely decisions to authorize the construction of facilities, allocation of funds, or the deployment of logistic elements necessary to adequately prepare the logistic base necessary to support combat operations in Vietnam.

e. Planning for the development of the logistic base in Vietnam was hampered by the absence of any expected time duration for the planned military contingency operations. In the absence of such guidance, base development planning proceeded along the lines of minimum standards of construction for all facilities. Standards were to be upgraded to higher standards when it could be determined that U.S. operations were to continue over an extended period of time. These methods would have been costly in terms of construction effort, materiel consumption, and time.

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f. Delays in the recognition and planning for the installation or construction of deep-draft pier facilities in the designated port areas contributed to the port congestion and the slow turn-around of vessels experienced generally during the first 2 years of operations. Contingency plans of the magnitude of those pertaining to SE Asia should provide for the early development of the necessary port facilities and connecting lines of communication to ensure the capability to support the planned force levels.

g. The war reserve posture within PACOM to support existing contingency plans was given an on-site appraisal to determine the pre-stock policies and status of CINCPAC's component commands prior to the initial decisions to deploy U.S. combat forces to Vietnam. This assessment was restricted primarily to the adequacy of pre-stocked materiel to support the forces assigned to PACOM. Support of augmentation forces destined to come from CONUS was presumed to be forthcoming from the CONUS-based contingency stocks. This fragmented approach toward determining the adequacy of pre-positioned war reserves within the geographic area assigned to a commander or a unified command raises serious doubts as to its validity. It also suggests that stocks earmarked specifically for the support of the contingency plans pertaining to SE Asia had not been identified, nor did they include materiel for application against the anticipated requirements of allied forces. Contingency planning accomplished by commanders of unified commands should include specific guidance concerning the levels of support and objectives to be achieved by their pre-positioned war reserves.

h. The logistics planning performed by the Services for the support of U.S. and allied forces being deployed to Vietnam was handicapped during the earlier phases of the buildup by the lack of timely or accurate information concerning the composition or the phasing of forces approved for deployment. Some logistics planners did not have access to the proposed or approved deployment lists because of the security classification and limited distribution assigned to the documents. Planning difficulties were compounded by the inadequate lead time allowed between approval and the actual movement of the forces and by the lack of stability in the deployment lists as they went through the development, review, and approval processes. Efforts to identify the materiel requirements to support each package of planned unit deployments were characterized by their confusion and lack of success. Planning for the support of the operations undertaken in Vietnam adequately demonstrated the need for more timely and effective coordination at all the echelons engaged in the planning process.

i. In spite of the problems associated with logistics planning efforts, the planning processes used by the Services to forecast requirements for the principal items of materiel were considered adequate for the support of forces employed in SE Asia. Some shortages developed during the first year of operations in the categories of helicopters, voice security equipment, integrated wideband communication systems, mobile pier units, POL pipelines, and combat uniforms. However, none of these shortages was considered by COMUSMACV to be critical or to have adversely affected combat operations in Vietnam. This would strongly suggest that the Services had done a creditable job of at least identifying the items of materiel that would be needed by our forces and undertaking the actions necessary for their delivery to the objective area in time to meet the demands of combat operations.

CHAPTER IV
REQUIREMENTS FORECASTING

CHAPTER IV

REQUIREMENTS FORECASTING

1. INTRODUCTION

a. General. Requirements forecasting, the process whereby the materiel needs of the Services are determined, is an integral part of logistics planning. This chapter addresses the policies and procedures relating to requirements forecasting of principal items. In addition, this chapter briefly presents the impact that the late publication of Logistics Guidance had on the computation of secondary items for mobilization reserve stocks. Secondary items for mobilization reserves are computed and managed quite differently from principal items, and these processes are described in Chapter IV of the DSA/GSA Support Monograph.

b. The Requirements Forecasting Process

(1) A requirement is a validated need, stated in qualitative and quantitative terms, justifying application of resources for performance of a military objective, mission, function, or task. The requirements forecasting process for principal items is based on approved forces, missions, and authorization documents. Through FY 71, the requirements forecasting process began with Logistics Guidance, which was published annually by the Secretary of Defense. This guidance established procurement objectives for materiel support of the approved forces. Responsibilities of the Joint Chiefs of Staff and military departments concerning the development and continuing adequacy of Logistics Guidance have been enumerated in Chapter II of this monograph.

(2) The requirements forecasting function is a basic responsibility of the military departments. In consonance with the authorizations contained in Logistics Guidance, each requirements determination or forecast must:

- (a) Consider the events that must occur to achieve the objective.
- (b) Determine the total resources needed and when they will be required.
- (c) Consider the application of available resources to satisfy the requirement.

(3) The quantitative expressions of principal item requirements are submitted with the annual budget estimates and are subject to review, challenge, and/or approval by the Office of the Secretary of Defense (OSD). Chapter II of this monograph outlined specific responsibilities of the Joint Chiefs of Staff, commanders of unified and specified commands, and military departments relative to the requirements forecasting process.

(4) The quantities of principal items for which the Defense Supply Agency (DSA) and the General Services Administration (GSA) have integrated management responsibility are determined by the Services. These requirements are provided to the DSA and the GSA for acquisition. Therefore, the roles of these agencies concerning requirements forecasting for principal items are not further addressed in this monograph.

c. Organization. This chapter presents a review of the Logistics Guidance for FY 63 through FY 71 because of its importance to requirements forecasting. It also includes a description of the requirements forecasting procedures used by each Service and a summary of conclusions and recommendations.

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2. LOGISTICS GUIDANCE

a. Introduction. As previously indicated, Logistics Guidance is the key element to requirements forecasting because it establishes the levels of materiel support authorized for the approved forces. This analysis covers the Logistics Guidance in effect for FY 63 through FY 71. Whereas the primary emphasis of the examination was directed toward the years spanning the Vietnam era, it was necessary to study the guidance relating to FY 63 and FY 64, because programs and objectives for these years directly influenced the materiel readiness posture of the Services on 1 January 1965.

b. Significant Evolutionary Aspects. Significant evolutionary aspects concerning the guidance for the period FY 63 through FY 71 are contained in Appendix A of this monograph. A résumé of the evolutionary aspects is depicted in Table A-9 of Appendix A of this monograph. The table summarizes the types of guidance documents and their publication dates, together with a general indication of the authorizations contained therein. For example, it is noted that:

(1) A pipeline was not authorized in the Logistics Guidance Memorandum until FY 66, when it was authorized to the Army for ammunition and certain selected items. It was expanded to all Services for FY 68 for ammunition, combat consumables, and secondary items.

(2) D-to-P¹ was authorized for FY 65 for specified Army Divisions. For FY 68 D-to-P was authorized for specified forces of all Services for ammunition, combat consumables, secondary items, and petroleum, oil, and lubricants (POL).

c. Analysis. The analysis of the evolution and adequacy of Logistics Guidance for FY 63-FY 71 follows.

(1) Evolution. The evaluation of Logistics Guidance during the Vietnam era reflected the increased emphasis accorded logistical matters of the Services by OSD. The format evolved from a memorandum on procurement guidelines and objectives to a section in the Draft Presidential Memorandum on General Purpose Forces, and then to the format of a separate Defense Guidance Memorandum on logistics. The guidance for each succeeding year contained an increased level of detail. This increased detail not only covered areas previously provided for, but added new areas, such as "Support of Allies" for FY 68, which had not been previously included in the guidance. The publication of a "For Comment" draft of Logistics Guidance began with FY 68. The "For Comment" draft memorandum announced the tentative decisions concerning the guidance in early February. The guidance covered the fiscal year that commenced 1 July of the year following publication of the memorandum, i.e., the memorandum published in February 1969 applied to FY 71. Commencing with the FY 68 guidance, the Joint Chiefs of Staff and the Services were required to submit comments concerning the draft guidance to the OSD within 30 days. These comments reflected the position of the Joint Chiefs of Staff and the Services and identified issues in relation to the materiel support of the approved forces. Subsequent to analysis of the comments, decision memorandums were published by OSD. The approved force structure, when combined with the levels of support authorized in the guidance, provided the Services with the bases on which requirements were forecasted. Although not all recommended changes were approved, an arena was provided for considering the views of the Joint Chiefs of Staff and the Services prior to formalizing the decisions of the Secretary of Defense.

(2) Adequacy

(a) Certain aspects of the guidance created problems for the Services. These aspects included (1) inadequate or no pipelines authorized for FY 63 through 67; (2) through FY 67, the direction to compute requirements on the assumption the war would end concurrently with the fiscal year; and (3) the requirement to count unserviceable assets as available assets for FY 63 through FY 70 (modified to an acceptable degree in FY 71 guidance). Support for the

¹The maintenance of sufficient stockpiles of war reserves to sustain operations from Deployment Day (D-Day) until the date that the production base can be increased to meet expanded operational requirements (P-Lay).

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Vietnam buildup was not authorized in FY 63 through FY 66 guidance; however, the FY 67-FY 68 guidance authorized support for an expanded force structure because of the forces committed in Vietnam. The inability to predict the magnitude of the war in Vietnam and to logically program for the buildup resulted in drawing down assets from other forces to support Vietnam. It is improbable that planners can predict the location and extent of U.S. involvement in future conflicts. For this reason it would be difficult to provide instructions and authorizations to fully program logistic support for any unforeseen involvement without drawing from assets of forces oriented toward other areas. It is not economically feasible to provide a full inventory to support every contingency in which the United States could become involved. The level of logistic support should be the best estimate of what is required to support national objectives, recognizing that this level will not provide a complete, on-hand stockpile of logistic support for the full range of contingencies. Therefore, it most probably will be necessary to repeat the drawdown process to support a future contingency operation. However, the required package appraisal of operation plans can preclude such drawdowns when they impact on supportability of national strategy. (See Chapter V for a detailed discussion and recommendation for resolution of this planning deficiency.) Logistics Guidance authorized specific levels of support and these levels provided a total of assets from which equipment could be drawn to support commitments according to their priority.

(b) During this study, Service comments were solicited concerning the timeliness and adequacy of Logistics Guidance pertaining to principal item support of Vietnam. The Services were unanimous in their views that late publication of Logistics Guidance several times during the Vietnam era did not adversely affect the computation of principal item requirements. The guidance was considered adequate, except for the points summarized in the following paragraphs.

1. Army

a. The guidance through FY 67 specified a fixed cutoff date for SE Asia consumption. This weakness was corrected by the FY 68 guidance that provided for consumption through the budget year funding delivery period.²

b. The guidance did not authorize procurement of a pipeline during the early stages of the buildup. This was corrected by subsequent guidance that authorized a SE Asia pipeline.³

c. Prior to FY 71, unserviceable items were required to be counted as available assets.⁴

2. Navy. Initially a materiel pipeline, mobilization training support, and D-to-P stocks were not authorized. The guidance for FY 68 was revised to authorize these allowances.⁵

3. Marine Corps. The guidance was considered adequate.⁶

4. Air Force. The guidance was considered satisfactory.⁷

² Department of the Army, Representatives of the Deputy Chief of Staff for Logistics, Discussion held in Washington, D.C., 12 December 1969.

³ Ibid.

⁴ Headquarters, U.S. Army Materiel Command Deputy Commanding General, Discussion held in Washington, D.C., 24 December 1969.

⁵ Department of the Navy, Representatives of the Deputy Chief of Naval Operations for Logistics, Discussion held in Washington, D.C., 23 December 1969.

⁶ Headquarters, Marine Corps, Representatives of the Assistant Chief of Staff, G-4, Discussion held in Washington, D.C., 2 December 1969.

⁷ Department of the Air Force, AFSSS, Letter, subject: Information for Requirements Forecasting Monograph, 30 December 1969.

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d. Effect of Logistics Guidance on Secondary Item Forecasting

(1) The process for forecasting secondary item requirements is more complex than for principal items, particularly in the war reserve area. The general mobilization reserve stocks managed by DSA highlight this problem. Annually, DSA requests general mobilization reserve requirements from the Army and Marine Corps and information from which the Agency can compute Navy and Air Force requirements. The Services select the items for which general mobilization reserve requirements will be computed. DSA is responsible for reviewing the Services' item selection and mobilization reserve computations when computing the general mobilization reserve requirements for those items managed by the Agency. DSA also budgets for these requirements.

(2) The process whereby the Services evaluate Logistics Guidance, compute principal item requirements, determine secondary item requirements to support the principal items, and select the secondary items for which DSA must compute general mobilization reserve requirements is a time-consuming procedure. After the foregoing process is completed and DSA is advised of the items selected, the Agency must:

- (a) Evaluate and validate the item selection and requirements of the Services
- (b) Compute acquisition objectives and determine stock deficiencies
- (c) Prepare and submit a budget to the Secretary of Defense.

(3) Timing is one of the most critical aspects of the computation of mobilization reserve requirements. Each year the Services and DSA must complete their Mobilization Reserve item selection and computation tasks between the time the Logistics Guidance is issued and the budget is submitted. Typically, Logistics Guidance was issued during May and June and the budget was submitted in October. The relatively short period of time available for computing the complex computation process together with changes to the fundamental elements in Logistics Guidance, such as overseas pipeline, post-D-Day safety level, training, and D-to-P authorizations, all contributed to the problem of developing valid mobilization reserve requirements.

(4) The requirements computation processes necessitate extensive use of automated programs by the Services and DSA. Changes to the fundamental elements authorized by Logistics Guidance result in a significant workload to effect data processing programming changes. The timely publication of guidance reflecting greater stability of elements upon which the computation of requirements are based would facilitate advanced planning and the computerized development of materiel requirements. (Chapter IV, DSA/GSA Support Monograph, contains a detailed description and discussion of the requirements forecasting processes for mobilization reserve stock and the relationship of Logistics Guidance with this function.)

e. FY 72 Logistics Guidance

(1) The Planning, Programming, and Budgeting System (PPBS) of the Department of Defense (DOD) was revised effective 1 January 1970 for the FY 72 budget cycle. The new system requires the Services to develop force structures and their support within funding limitations imposed by the Secretary of Defense. As a result of this new system, the scope and role of Logistics Guidance was changed as follows:

(a) Prior to FY 72 the guidance had established levels of support for the approved forces and had contained specific instructions for computing gross requirements. The FY 72 guidance sets broad objectives and defines responsibilities for materiel support planning; however, it does not establish levels of support or identify the approved force structure to be supported.

(b) The role of the guidance has changed. Where the constraints in the past had been contained in both Logistics and Budget Guidance, the principal guidance and constraints are now contained in the Fiscal Guidance, which is published annually by the Secretary of Defense. The Fiscal Guidance Memorandum contains tentative 5-year fiscal guidance to define the

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total financial constraints within which the DOD force structure will be developed and reviewed. For planning purposes the totals in the Fiscal Guidance for each program year and each military department and Defense Agency will be considered firm.⁸

(2) Also new to the system are the Joint Force Memorandum and Program Objective Memorandum. The Joint Force Memorandum submitted by the Joint Chiefs of Staff to OSD, with copies to the Services and the Defense Agencies, presents recommendations on force levels and support programs that can be provided within the fiscal constraints contained in the Fiscal Guidance Memorandum. It includes an assessment of risk in the recommended forces as measured against the strategy and objectives contained in the Joint Strategic Objectives Plan (JSOP) and the Strategic Guidance Memorandum. The Program Objective Memorandum is submitted to the Secretary of Defense by each Service and Defense Agency. It expresses total program requirements and is based on the strategy guidance and fiscal constraints published in the JSOP, Strategic Guidance Memorandum, Fiscal Guidance Memorandum, and the Joint Force Memorandum. The Program Objective Memorandums provide an assessment of any deviations from the Five Year Defense Program (FYDP) base file and the Joint Force Memorandum.⁹

(3) A valid assessment of the adequacy of FY 72 Logistics and Fiscal Guidance with respect to requirements forecasting cannot be made until a cycle of the new PPBS has been completed.

3. SERVICE PROCEDURES

a. General

(1) The procedures used by the Services to determine and compute requirements for principal items are discussed in this paragraph. This discussion includes the elements of the gross requirement, asset position, and net or programmed requirement. As mentioned earlier, the Service requirements for principal items are based on the approved force structure, missions, and authorization documents. However, additional requirements are generated as a result of the Services' commitments to support tasks assigned to them by commanders of unified commands for contingency operations. Since these requirements are identified differently by the Services, different terms are used to express the same element of the gross requirements. For example, the Army uses the term "Operational Project" to essentially express what the Navy terms "Special Projects." Basically, the processes of each Service have three key elements: the computation of gross requirements, the determination of asset position, and the derivation from these two elements of the net or programmed requirement. Simply stated, the requirements forecasting process started with the approved force structure and authorizations contained in the Logistics Guidance as portrayed in the following relation:

$$\begin{aligned} & (\text{Approved force structure}) \times (\text{Equipment authorizations [Initial allowances]}) + \\ & (\text{Additives [includes both those required for the approved force structure, e.g., pipeline, maintenance float, war reserve, and those required for support of contingency operations, e.g., operational projects]}) = (\text{Gross requirement}) - \\ & (\text{Total assets [Inventory and on-order quantity]}) = (\text{Net or programmed requirement}). \end{aligned}$$

(2) As previously indicated, Logistics Guidance did not establish the force levels; however, it did display them and established the levels of support authorized the approved forces. All Services used this guidance as the starting point in requirements determination and then published implementing instructions, as appropriate, to subordinate materiel activities. An important objective of this chapter is to present an appraisal of the responsiveness and effectiveness of the requirements forecasting function as it related to principal items. To make this appraisal, it was necessary to secure the Services' views of certain aspects of the requirements

⁸ Department of Defense Instruction 7045.7, The Planning, Programming, and Budgeting System, 29 October 1969.

⁹ Ibid.

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forecasting function during the Vietnam era. These aspects were asset position, use of substitute items, reporting of combat losses, and providing for unforeseen requirements. In addition, each of the Services was requested to provide its views of the responsiveness of the system in fulfilling requirements for Vietnam. The various Service procedures and views are outlined in the following paragraphs.

b. Army

(1) The Deputy Chief of Staff for Logistics implements Logistics Guidance through publication of the Procurement of Equipment and Missiles Army (PEMA) Policy and Guidance. This latter document provides the bases for computation of the gross requirement.

(2) Within the Army Staff the Assistant Chief of Staff for Force Development manages and prepares the force basis. The OSD provides guidance concerning types of units and total force structure that are authorized. The Assistant Chief of Staff for Force Development develops the total force and computes the equipment requirements needed to equip each unit. This information developed through the Structure and Composition System is a series of computer programs that arrays qualitative and quantitative personnel and equipment requirements of the force. It contains equipment authorizations for each type of unit in the Army, including those that have unique authorizations pertaining to nonstandard Tables of Distribution and Allowance (TDA) units. This system was completed in July 1968. Prior to the advent of this system, computations were developed from Tables of Organization and Equipment that did not reflect authorizations resulting from dynamics of unit missions, varied operational environments, and equipment modernization programs. The equipment requirements tape produced by the Structure and Composition System is forwarded to the U.S. Army Major Item Data Agency (MIDA) by the Deputy Chief of Staff for Logistics.

(3) MIDA applies PEMA Policy and Guidance to the initial-issue equipment requirements. This computation adds maintenance floats, operational projects, combat consumption, mobilization training, and pipelines that are authorized by the guidance. The product is the gross requirement. In addition, MIDA, in conjunction with the National Inventory Control Points (NICPs), prepares the Army Materiel Plans (AMPs). These plans depict materiel requirements for all elements that comprise the gross requirement. AMPs also provide detailed asset information that shows current assets together with projected assets and losses. Based on this starting point of requirements versus assets, the plans consider and display data pertaining to procurement plans, production schedules, contract data, mobilization production data, cost detail, and other information necessary to the management of the items. In summary, the plan links together the planning, programming, and budgeting process.

(4) Following are comments concerning:

(a) Asset Position. The Army employs several major asset reporting systems that are designed to provide data on the Army asset posture. These systems are summarized and evaluated in the following paragraphs.

1. Current Systems. The following systems were in effect during the Vietnam era.

a. The Equipment Status Reporting System provides for reporting quantities and authorized allowances of selected items of equipment at organization, unit, or activity levels.

b. The Overseas Depot Stock Status Report provides for reporting on-hand balances in depot stock of designated items of equipment, assemblies, and repair parts.

c. Army Supply Status of Selected Assets under Continental U.S. Inventory Control Point Accountability provides for the submission of asset data related to selected items of equipment.

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d. The Army Equipment Record System provides for reporting equipment gains, losses, and transfers by each organizational property book and stock record account.

e. Operational Project reporting provides for quarterly reports on requirements and on-hand assets by the proponent of the project.¹⁰

2. Effectiveness of Systems

a. The major shortfall is the multiplicity of reporting systems. One uniform system designed to generate timely, complete, and accurate data is required for the programming of requirements.¹¹

b. The Army has recognized deficiencies in asset reporting procedures, and in September 1969 it completed a study entitled Near-Term Improvements in Materiel Asset Reporting (TIMAR-1), which includes recommendations for corrective actions. Recommendations contained in the study are being implemented with the exception of the in-transit control procedure, which is yet under study.¹²

(b) Substitute Items. The OSD restricted the procurement of those items of equipment where the quantity of Contingency and Training (nonacceptable substitute) items on hand was significant. The impact was on the Reserve forces, where most of these assets were used. Consequently, new items from production and depot stocks were inadequate to fulfill Vietnam requirements; this necessitated drawing down standard items from lower priority units.¹³

(c) Combat Loss Reporting. In-theater combat loss reporting did not allow sufficient time for the supply system to react and provide resupply when required. Accordingly, loss factors based on the best intelligence available were used at the time of requirements forecasting. By this technique, most combat losses were replaced with minimum loss of time, and, insofar as principal items were concerned, few excesses developed in-country. Recommendation for improvements in combat loss reporting procedures is included in the TIMAR-1 Study. The projected consumption rates at the beginning of the Vietnam era were based on rates determined from previous combat experience, i.e., World War II and the Korean War. These rates were not valid, especially in the ammunition area.¹⁴ Steps were taken to collect data relative to actual consumption rates in Vietnam. One of these steps was the Combat Operations Loss and Expenditure Data—Vietnam (COLED-V) system. This system has been operational since August 1966 and has provided consumption data relating to approximately 900 items.¹⁵

(d) Unforeseen Requirements. During the Vietnam buildup, requirements arose that had not been programmed. These demands were satisfied by accelerated production and reallocation of resources that included drawdowns in depot stocks, maintenance floats, and assets of lower priority units. The replacement of these reallocations was programmed through supplemental budget submissions.¹⁶

(e) Responsiveness in Fulfilling Requirements for Vietnam. Generally the requirements forecasting process for principal items was adequate for support of Vietnam. As

¹⁰ Department of the Army, Office of the Deputy Chief of Staff for Logistics, TIMAR-1, Near-Term Improvements in Materiel Asset Reporting, September 1969, pp. 1, 2.

¹¹ Ibid., pp. 2, 3.

¹² Department of the Army, Representatives of the Deputy Chief of Staff for Logistics, Discussion held in Washington, D.C., 12 December 1969.

¹³ Ibid.

¹⁴ Department of the Army, Deputy Assistant Secretary of the Army (Installations and Logistics), Discussion held in Washington, D.C., 15 December 1969.

¹⁵ Department of the Army, Office of the Deputy Chief of Staff for Logistics, TIMAR-1, Discussions held with Team Chief in Washington, D.C., 12 December 1969 and 7 January 1970.

¹⁶ Department of the Army, Representatives of the Assistant Secretary of the Army (Installations and Logistics), Discussion held in Washington, D.C., 15 December 1969.

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previously discussed, there were weaknesses in the system, notably in the areas of asset position and combat loss reporting; however, these weaknesses have been identified by the Army and corrective actions are being taken.

c. Navy

(1) The Logistics Guidance is implemented within the Navy by the Navy Support Plan (NSP). The NSP is prepared within the Office of the Chief of Naval Operations (OPNAV) with inputs from other responsible offices of the Navy. It contains policies and guidance for the support of approved Active and Reserve forces and covers the mid-range period from the current fiscal year through eight subsequent fiscal years. Approved force levels are in agreement with the FYDP. The NSP is continuously in effect for planning purposes and is updated as changes occur.

(2) Logistic support requirements within the Navy are developed for force units, ships, aircraft, and bases. Requirements include initial allowances for items that are determined by the characteristics, configuration, and missions of these force elements; peacetime and combat support based on an expected use rate or mission to be accomplished; items of equipment that are replaced through obsolescence or wear; and materiel pipelines as authorized.

(3) The development and review of requirements for principal items is established by Secretary of the Navy Instruction (SECNAVINST) 4000.5A, "Preparation of Materiel Planning Studies for Principal Items." This instruction states that the Chief of Naval Operations (CNO) will provide peacetime and mobilization plans, planning assumptions and factors, and other guidance as appropriate on which requirements for principal items will be based. This instruction further outlines the responsibilities in this area of OPNAV, the Comptroller of the Navy (NAVCOMPT), the Chief of Naval Material (CNM), the Naval Material Command Support Activity (NMCSA), and the Director of Logistics Review, Office of the Assistant Secretary of the Navy (Installations and Logistics).

(4) The determination of materiel requirements of principal items for current and mobilization programs is accomplished at the Navy Systems Command level (Naval Air Systems Command, Naval Ordnance Systems Command, Naval Supply Systems Command, Naval Ship Systems Command, Naval Electronic Systems Command, and Naval Facilities Engineering Command) through the "Materiel Planning Study," DD Form 764. The Materiel Planning Study is prepared semiannually, or as significant changes occur, and submitted in accordance with SECNAVINST 4000.3C.

(5) Information needed to develop requirements is obtained from documents such as Tables of Organization and Equipment, Tables of Allowances, the Navy Aircraft Program, the aircraft engine Master Configuration List, and the Mobilization Operating Aircraft Program. Calculations are made from this input data derived from factors based on experience and past performance.

(6) Following are comments concerning:

(a) Asset Position

1. The determination of naval assets throughout the Vietnam era has been accomplished by in-being reporting systems. Assets within the Navy are reported by functional area to the appropriate commodity managers. These reporting systems are not identical in that special reporting needs of various inventory managers are incorporated therein. Each commodity manager essentially establishes his own system for the reporting of assets within his commodity area in accordance with his management needs.

2. Principal items (excluding ordnance) that are in stock at a naval supply center or a naval supply depot are reported daily to the Commodity Manager on a transaction basis as issues or receipts are made. These reports reflect quantity, nomenclature, and type of issue made. The requirements determination for ammunition and the Worldwide Ammunition Reporting System are discussed in some detail in the Ammunition Monograph.

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3. All in-stock assets are also reported on a periodic basis. The reporting frequency for these assets is based upon the "velocity of movement" of an item. Velocity of movement is dependent on the frequency of issue, the volume issued, and the dollar value per issue. An in-place inventory is taken aboard all ships just prior to overhaul, about every 3 years on the average. At this time an inventory is conducted pertaining to the principal items aboard ship.¹⁷

(b) Substitute Items. The inclusion of substitute items in the Navy inventory results in an overstated readiness posture. This was particularly true in the torpedo, mine, and missile areas wherein the inclusion of substitute items provided only a marginal readiness capability and reflected an overstatement of operational readiness. The inclusion of marginal substitute items did not have significant impact on the support of SE Asia requirements because the newest and best item was invariably used in SE Asia operations.¹⁸

(c) Combat Loss Reporting. The Navy utilizes the same reporting procedures for losses during combat that are in effect in peacetime. The Navy system for reporting losses does not differentiate between noncombat and combat-induced losses. The commodity managers are essentially concerned with the quantity of the asset that is consumed, rather than whether it was lost because of training, normal operational use, or enemy actions. The loss reporting system presently used has not presented any major problems concerning the determination of materiel requirements for Vietnam and is considered to be responsive and adequate for the reporting of losses to the Navy inventory.¹⁹

(d) Unforeseen Requirements. New requirements to support operations in Vietnam were included in supplemental requests authorized by the Secretary of Defense during calendar years 1965 and 1966. However, the majority of unforeseen requirements in SE Asia were financed by reprogramming from non-SE Asia programs. These reprogramming actions had the undesirable effect of reducing priority programs, deferring essential programs for subsequent funding, and cancelling low priority programs. These effects are expected to result in an adverse long-term effect on overall Navy operational readiness. Atlantic Fleet assets and pre-positioned war reserve stocks have been used extensively to satisfy SE Asia needs.²⁰

(e) Responsiveness in Fulfilling Requirements for Vietnam. The scope of the air war in Vietnam was controlled by the allied forces, making it possible to program support materiel to the actual quantities planned without the necessity of maintaining large operating and safety levels. This situation, combined with the concept of escalation, provided an adequate opportunity to program for the materiel required with minimum shortages. Estimates of expenditures were provided by the Commander in Chief of the Pacific Fleet (CINCPACFLT) to CNO, who took action to budget and program for the required support. As requirements escalated, revised expenditure estimates were provided by CINCPACFLT. This system was adequate to meet the needs of Vietnam; however, these revised estimates were not in phase with the budget process, and it was necessary to reprogram from other priority programs to meet those needs as they occurred with direct impact on non-SE Asia programs. Atlantic Fleet assets and pre-positioned war reserve stocks were used extensively to minimize potential shortages for Vietnam with a direct impact on the readiness of the Navy to support other contingencies.²¹

d. Marine Corps

(1) For purposes of this discussion, principal items fall conveniently into two categories: those provided by the Marine Corps and those provided by the Navy. The following discussion provides an overview of requirements forecasting procedures relating to these categories.

¹⁷ Department of the Navy, Representatives of the Deputy Chief of Naval Operations for Logistics, Conferences held in Washington, D.C., 23 December 1969.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

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(a) Items Provided by the Marine Corps

1. This category comprises most of the principal items in the Marine Corps inventory. The computation of requirements for these items is accomplished at Headquarters, Marine Corps (HQ USMC). The process involves the determination of the gross requirement, asset position, and net requirement for each principal item. The net requirement then becomes the program requirement.

2. The division within HQ USMC responsible for the computation of requirements is the G-4 Division. The G-4 coordinates details concerning force structure with the G-3 Division and is dependent upon the Supply Department for asset information.

3. The vehicle utilized for the computation process is the Summary Item Readiness Study, Exhibit P-20A. This is an exhibit required by DOD Instruction 7110.1-M, "Manual for Preparation of Budget Estimates, Operating Budgets, Financial Plans and Apportionment Requests, and Related Support Material." This manual requires submission of Exhibits P-20A for procurement line items that exceed an established procurement cost. The exhibit is, however, prepared by Marine Corps forecasters for the computation of requirements for all principal items.

4. The mechanical functions involved in these computations are accomplished utilizing an automated data processing program. Headquarters Order 4400.5, "Project III D Automated Logistics Data System," outlines this program. To determine gross requirements the program combines the approved force structure as contained in the latest Logistics Guidance, approved allowances to include the phasing in of new items, consumption replacement factors, and levels of support authorized by the current guidance. The current asset information is combined with projected losses and gains, and when compared with the gross requirement for an item, the product of this comparison becomes the net requirement.

5. A manual review of the information contained in the completed Exhibit P-20A is accomplished by the Material Requirements Branch, G-4 Division, HQ USMC. This review is conducted to ensure accuracy, completeness, and conformance with Logistics Guidance and Marine Corps policy.

(b) Items Provided by the Navy

1. The principal items provided by the Navy are those relating to Marine aviation, including items such as aircraft, aircraft support equipment, and aviation ordnance (including air-to-air missiles). Navy General Order Number 5 sets forth the relationship between the Commandant of the Marine Corps (CMC) and CNM. This General Order states, "The Commandant of the Marine Corps will express to the Chief of Naval Material those Marine Corps material needs which are to be provided by the Naval Material Command."

2. The responsibility for providing for and meeting materiel support needs of aviation-related materiel for Navy and Marine Corps forces is assigned to the Naval Air Systems Command (NAVAIR), which is a subordinate command of the Naval Materiel Command (NMC).²² The responsibility of the Commander of NAVAIR for forecasting Marine Corps requirements is restricted to those items that are provided by the Navy. The requirements for these items are computed in the same manner as and combined with the requirement for Navy forces to arrive at a gross requirement. This requires asset reporting to the Navy commodity commands responsible for providing materiel support to the Marine Corps. The reporting system is the same as that for Navy commands.

3. The Marine Corps influences the forecasting of Marine aviation requirements in the following manner:

²²Department of the Navy, R&T&E Management Guide, 1 July 1969, pp. E-40-43.

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a. Coordination between CMC and CNO is facilitated by the dual capacity served by the personnel assigned to the Office of the Deputy Chief of Staff (Air), HQ USMC. These personnel also serve as members of the staff of the Deputy Chief of Naval Operations (Air).

b. Marines are assigned to the staff of the Commander of NAVAIR.

c. Marines, both from HQ USMC and operational commands, serve as members of committees that determine materiel allowances for Navy and Marine Corps aviation units.

d. CMC informs CNO and the Commander of NAVAIR where Marine aviation units will be based. The location of units has a direct bearing on the requirements for support equipment.

4. In the event that differences of opinion arise concerning Marine requirements that are not resolved within the framework outlined above, CMC makes his position known to CNM and/or CNO, as appropriate. Unresolved differences at this level are referred by CMC to the Secretary of the Navy for adjudication.

(2) Following are comments concerning:

(a) Asset Position. The system employed to provide asset visibility at the beginning of the Vietnam era was outlined in Marine Corps Order 4440.19, "Inventory and Monthly Updating Report of Selected Items." This system provided asset information on approximately 850 selected items for the entire Marine Corps. This information was updated monthly by input from using units as well as supply activities. Asset visibility on the remainder of the principal items was maintained on stocks at the wholesale level only. The introduction of the Marine Corps Unified Materiel Management System, on 1 May 1967, resulted in a revised system for maintaining asset visibility. The Controlled Item Management Manual (Marine Corps Order P4440.82) outlines the system that was placed in operation on that date and remains in effect today. This system provides total Marine Corps asset visibility for approximately 1400 principal items, all secondary-depot level repairables (3500 items), and selected secondary items. Marine Corps Order 4440.19D, the subject of which is "Controlled Items Reporting," contains amplifying instructions for reporting units as well as a list of the reported items. In the transition to the Marine Corps Unified Materiel Management System, some problems were encountered as a result of unit redeployments, changes in inventory resulting from operational needs, and operating personnel turbulence. Refinement of the system has continued and a reconciliation of worldwide selected assets is expected to be completed in the fall of 1970.

(b) Substitute Items. The old items of equipment are phased out of the system over a period of time rather than completely purging the system at once. Thus, at any point in time the asset inventory will include substitute items. Substitute items are usually issued first so long as use of the substitute item was compatible with operational needs. Generally, the use of substitute items for support of Vietnam requirements had no adverse impact. Priority for modernized items was given to units in Vietnam.

(c) Combat Loss Reporting. Combat loss reporting procedures were adequate. Marine Corps Order 4440.19D contains instructions for reporting combat losses as well as other changes in asset positions. This order defines a combat loss as "the total loss to the Marine Corps inventory of an item due to loss or consumption as a result of combat operations. An item requiring removal to a higher repair echelon is not considered a combat loss unless it is eventually considered to be nonrepairable and, therefore, eliminated from the Marine Corps inventory." The combat loss is reported by the unit or activity in the evacuation chain that determines the item is not economically repairable. At the beginning of the Vietnam era, the "book rates" or rates computed from analysis of previous combat operations (World War II and the Korean War) were used to predict combat losses. During the period, separate SE Asia rates were developed as experience provided new information; these rates are now used for forecasting SE Asia requirements. The book rates have not been adjusted to reflect SE Asia rates.

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(d) Unforeseen Requirements. During the buildup of forces in Vietnam, requirements arose that had not been programmed. These requirements were provided by reallocation of Marine Corps assets and included depot stocks, maintenance floats, and assets of lower priority units. These assets were reconstituted by reprogramming and/or supplemental programming action. In addition, other Services, notably the Army, provided the Marine Corps with some low-density items, such as bridging equipment, bridge boats, and 175mm gun artillery pieces.

(e) Responsiveness in Fulfilling Requirements for Vietnam. The logistic support of units in Vietnam was adequate. These forces received priority for issue from the supply system, as well as priority for the introduction of new items of equipment. This policy, simply stated, was that the requirements of units in a combat environment should be satisfied on a priority basis. The policy did result in old or substitute items in the inventory of lower priority units and temporary shortages of some items for these units.²³

e. Air Force

(1) Within the Air Force, the Logistics Guidance is promulgated by a covering memorandum to the Air Staff for use in planning requirements in support of Air Force missions. The covering memorandum is called an Air Force Decision Letter. It directs the Air Staff to take appropriate actions to achieve the inventory objectives stated in the Logistics Guidance. It is published by the Director of Aerospace Programs, at Headquarters, United States Air Force (HQ USAF). The requirements specified in the Logistics Guidance are directed to the field by several HQ USAF agencies using various documents that are described in subsequent paragraphs. In the Air Force materiel management system, distinction is not made for management purposes between the categorization of an item as principal or secondary. For purposes of complying with DOD Instruction 4140.24, however, the Air Force classifies certain categories of items as "secondary." This DOD Instruction requires the components to apply uniform procedures in the stratification of secondary items. Items in the Air Force supply system that most nearly fit the definition of principal item are equipment items that include aerospace ground equipment, vehicles, test equipment, tools, workstands, and organic communications-electronics-meteorological equipment (not permanently installed). These equipments are managed under Air Force Equipment Management System (AFEMS) which is described in Air Force Manuals 67-1 and 171-14.

(2) In addition to equipment items of supply that are managed through the AFEMS, there are other items and commodities that are managed and computed by other methods because of their importance, cost, criticality, and peculiarity. Examples of these are petroleum, air munitions, aircraft engines, missiles, herbicides, and communications-electronics-meteorological equipment. The computation methods are different because the management methods are different and requirements computations are the result of supply techniques used to satisfy demands.

(3) The Air Force uses computational methods based on three major requirements philosophies and certain specialized methods for individual commodities such as aircraft engines.

(a) The first category includes "spares," which are items that lose their identity when installed in equipment and normally are subject to repair upon failure in use. Requirements in this category are computed on the basis of applicable Air Force programs and worldwide assets and experience data. The programs are expressed as flying hours, aircraft inventories, bases and units, and other projections of intensity of operations or size and composition. For missiles, "missile months" are the basis for computation. Projected modification of aircraft, missiles, and equipment is also used to compute spares requirements.

(b) The second category includes repair parts. These are items consumed in use and normally not subject to repair. For this category, Economic Order Quantity (EOQ)

²³ Headquarters, Marine Corps, Representatives of the Assistant Chief of Staff, G-4, Discussion held in Washington, D.C., 2 December 1969.

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computations are used and are computed on the basis of past demands; they are not based on program data. EOQ principles and computations are applicable to centrally procured items financed by the Air Force Stock Fund and are also known as expense items in the Resource Management System. It should be noted that for both of the methods just referred to, the initial requirements computations for new items entering the inventory differ in detail from later computations on a replenishment basis.

(c) The third category is known as equipment items and consists of end items needed to equip organizations and individuals. Sometimes they are referred to as replacement items. Under the Resource Management System, they are classified as investment items, as also are the spares in the first category. Computations of equipment items use data (authorization and asset) reported by using activities under the AFEMS and such other sources as installed communications, electronics, and meteorological systems reflected in the USAF Program-Communications-Electronics Support Program. Equipment authorizations in the Air Force are established on the basis of maximum allowance documents (e.g., Tables of Allowances) for the various types of organizations, considering size, mission, need, and location.

(4) Equipment to support war or contingency plans is generally included in the allowance document for the unit under the maximum allowances and therefore is not considered additive as a war reserve materiel requirement.

(5) Requirements computations for the three basic categories of items in the Air Force inventory are mechanized; i.e., they are performed on computers located at the Air Materiel Areas (AMAs). Recoverable consumption items are computed four times each month and nonexpendable replacement (equipment) items are computed twice annually. Requirements for nonnuclear munitions, petroleum, herbicides, and engines are computed manually at various management levels. Spare engine requirements are computed at Headquarters, Air Force Logistics Command (HQ AFLC), at the time new weapon systems are introduced into the inventory and are procured at that time for the life of the system.

(6) The Air Force strongly emphasizes the need for top-level review of the requirements computations by AMAs together with development and updating of annual buying programs. Twice annually, HQ USAF and HQ AFLC join in reviewing AMA computations of investment items. HQ AFLC Regulation 57-19, 25 October 1966, prescribes the policy and guidance to be used by AMA's Materiel Management Review Team to accomplish continual reviews of materiel management requirements actions and to check the accuracy of the requirements computations within the AMA. It establishes the review criteria, procedures, and the minimum signature levels for procurement, termination, and disposal documents. The team's meetings are regularly scheduled to ensure that all requirements computations are sampled a minimum of once each quarter. Computations are reviewed to evaluate compliance with policies and item manager judgment and analysis and to ensure the credibility of requirements decisions and actions. A HQ AFLC (MCG) Letter, subject: "Investment Items (XD, XF2) Buy Guidelines for FY 69," 23 August 1968, emphasized the stringent controls over the commitment and obligation of funds without changing requirements computation policy. It tasks the AMA Commander with the initial responsibility to get the obligations within the dollar limitation imposed by funds appropriations.

(7) Requirements to support the approved forces are computed and forecasted on the basis of guidance provided by a variety of documents published by HQ USAF and HQ AFLC. Principal among these documents is the USAF Force and Financial Program. The USAF Force and Financial Program, the counterpart of the FYDP, is updated bimonthly and published annually along with a group of documents known as the Air Force Program. The Air Force Program, revised quarterly, and the Force and Financial Program provide the Air Force commands with the basis for development of budgets, procurement of materiel, procurement and training of personnel, military construction, and general operations. The principal Air Force Program documents are:

Air Force Program Guidance
Air Force Program, Aerospace Vehicles and Flying Hours
Air Force Program, Bases, Units and Priorities

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Air Force Program, Communications-Electronics
Air Force Program, Special Weapons Capabilities and Equipage
Air Force Program, Manpower and Organization
Ai. Force Special Training Devices Program
Air Force Technical Training Program

(8) Usually in March of each year, the Director of Supply and Services, HQ USAF, publishes a "buy/budget" letter that provides the war readiness materiel and related wartime logistic support policies for the development of the buy and budget year programs. This document receives extremely wide distribution throughout the Air Staff and is sent to all major air commands, numbered air forces, and separate operating activities. Coverage is extended to all principal and secondary items that are war reserve materiel candidates for acquisition or pre-positioning and includes both nuclear and nonnuclear activities.

(9) The Air Force War and Mobilization Plan reflects the approved Air Force wartime deployment of forces by type of equipment and by operating location in wartime in support of the Joint Strategic Capabilities Plan. It contains the approved Air Force planning factors and requirements for expenditures of war consumables and provides the basis for development of logistic support documents, pre-positioning actions, and resource computations. It also identifies requirements as a basis for budget, procurement, and construction actions.

(10) Air Force Form 630B, "Materiel Procurement Program Control Plan," is used by HQ AFLC to submit equipment requirements to HQ USAF. The computations are made by the appropriate Inventory Manager, reviewed at every management level, and then transferred to the DOD Exhibit P-1 and other P-series documents at the HQ USAF level for submission to OSD. The content of the Air Force Form 630-B is derived from a series of programs provided to the AMAs by HQ AFLC and HQ USAF. HQ AFLC usually tailors the HQ USAF programs to suit various computational requirements and sends these supplemental programs to the AMAs on computerized tapes. Even after these requirements are refined and forwarded through various levels of management, including OSD, they continue to receive periodic attention to ensure continuing validity and correct pricing. The last formal review and repricing effort occurs at apportionment time, just prior to the start of the pertinent fiscal year.

(11) Following are comments concerning:

(a) Asset Position. The AFEMS, outlined in Volume IV of Air Force Manual 67-1, provided a very accurate equipment asset position during the Vietnam era. This program provided a monthly update of asset position to command level with a semiannual update to the AFLC. Since the early days of Vietnam, a data bank has been established in the AFLC. The data bank, which is updated monthly, provides a capability to ascertain, on almost a real-time basis, the worldwide asset position of any reportable equipment item. Munitions are reportable under other procedures outlined in Volume I of Air Force Manual 67-1, and Air Force Regulation 67-79.²⁴

(b) Substitute Items. The use of substitute items did not adversely affect the Air Force capability to forecast principal item requirements for SE Asia.²⁵

(c) Combat Loss Reporting. The Air Force does not have a systematic program for identifying combat losses of equipment items on a recurring report. Combat losses in SE Asia normally were reported as condemnations in accordance with normal AFEMS procedures or, as on several occasions, as combat losses by means of special reports following enemy action.²⁶

²⁴ Department of the Air Force, AFSSS, Letter, subject: Information for the Requirements Forecasting Monograph, 30 December 1969.

²⁵ Ibid.

²⁶ Ibid.

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(d) Unforeseen Requirements. Unforeseen requirements were supported by withdrawal from lower priority units including Air Reserve and Air National Guard forces. Such action degraded the capability of the units concerned to perform their wartime mission.²⁷ The Air Force also provided for SE Asia unprogrammed requirements by submission of supplemental budget requests and reprogramming, that is, by diversion of funds from non-SE Asia programs.

(e) Responsiveness in Fulfilling Requirements for Vietnam. The requirements forecasting process in being during the SE Asia buildup period was quite accurate and responsive except for munitions. However, throughout the period, the decisionmaking process occasionally failed to identify major changes in plans and program documents within the appropriate budget, buy, and production lead time. In the case of munitions requirements forecasting, requirements in many instances were overstated.²⁸ Before the 1965 escalation only the most rudimentary supply performance reports were available because of the manual system used at that time. A punch-card accounting machine system was in use during late 1964 and early 1965, but it was unable to cope with even the rudimentary reports. This condition led to a suspension, in late 1965, of all supply reports from SE Asia bases because of the lack of a computerized system and the workload generated by the buildup of troops and supplies and equipment. Pacific Air Force Headquarters acknowledged that the suspension was a grave mistake because vital asset information was not reaching the inventory managers.²⁹

f. Service Programs. After employment of the procedures described in the foregoing paragraphs, total resource requirements to support the approved force structure and contingency needs are aggregated, priced out, and submitted as budgetary requirements to CSD usually on 1 October of each year. Not all of the respective Service requirements are funded; however, there are adequate means available whereby unfunded but urgently needed shortfalls can be subject to reclama action. Unprogrammed requirements that develop after budget submission are included in Program Change Requests and the Secretary of Defense decision on these is called a Program Change Decision. If the request is approved, the decision may be in the form of a supplemental budget submission or a reprogramming action. In any event, any change to the approved force structure is reflected in the next updating of the FYDP. These procedures are similar in all Services. The details of these procedures are outlined in Appendix A to the Financial Management Monograph.

g. Summary

(1) The requirements forecasting procedures for principal items are similar in all Services. The processes of each Service have three key elements: the computation of gross requirements, the determination of asset position, and the derivation from these two elements of the net or program requirements. Although requirements are computed at various levels within the Services, there is no indication that this constitutes a weakness in any Service. The roles, missions, size, and organization of each of the Services are factors that dictate the optimum level at which the functions of requirements determinations and computations are performed.

(2) Service requirements forecasting processes for principal items were adequate for support of Vietnam. However, the support of Vietnam caused drawdowns of principal items from lower priority forces, and in some instances lower priority units were required to continue use of substitute items of equipment.

(3) Unforeseen principal item requirements were satisfied by a combination of accelerated production, redistribution of assets, reprogramming, and supplemental budget authorizations.

²⁷Ibid.

²⁸Headquarters, United States Air Force, AFSSS, Letter, subject: Munitions Logistics During the Vietnam Conflict 1965-1968, 16 September 1969.

²⁹Pacific Air Force, Briefing to Joint Logistics Review Board, September 1969.

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4. CONCLUSIONS AND RECOMMENDATION

a. Conclusions

(1) Adequacy of Logistics Guidance

(a) Refinements in the Logistics Guidance have evolved during the Vietnam era and reflect the increased emphasis accorded to logistic functions throughout the Department of Defense (paragraph 2c(1)).

(b) The annual Logistics Guidance for FY 63-FY 71, which specified the force structure and levels of support authorized the approved forces, was the basis for the determination of requirements by the Services (paragraph 1b(1)).

(c) Programming of support for the initial buildup in SE Asia was not provided for in Logistics Guidance (paragraph 2c(2)(a)).

(d) The levels of support authorized in Logistics Guidance (FY 63-FY 71) were intended to support the most likely contingencies in accordance with national security objectives (paragraph 2c(2)(a)).

(e) Logistics Guidance provided initial equipment authorizations for the approved forces. Beginning with FY 67, the Guidance did not provide a similar authorization for all temporary forces; consequently, equipment for temporary forces was provided by drawdowns from lower priority forces (Appendix A).

(f) Differences of opinion existed, and will probably continue to exist, among officials in the Office of the Secretary of Defense, Joint Chiefs of Staff, and the Services as to specific materiel requirements to support the assigned roles and missions of the Services. Effective with FY 68 the system for formulation and publication of the Logistics Guidance provides for consideration of the views of the Joint Chiefs of Staff and the military departments before decisions are made (paragraph 2c(1)).

(g) Adequacy of Logistics Guidance concerning:

1. Principal Equipment Items

a. Although the Logistics Guidance did not provide for the programming of support for the Vietnam buildup, the principal equipment items authorized for the overall force structure did support the buildup. In some cases it was necessary to draw down assets of other forces to support units committed to Vietnam (paragraphs 2c(2)(a) and 3g(2)).

b. Logistics Guidance was published late several times during the Vietnam era; however, this did not adversely affect the computation of requirements for principal items (paragraph 2c(2)(b)).

2. Secondary Items. The short period of time available for computation of mobilization reserve requirements has dictated computerization of this function. The changes to the fundamental elements and their values authorized in Logistics Guidance such as overseas pipeline, post-D-day safety level, training, and D-to-P Day authorizations resulted in a significant workload to effect data processing programming changes. Although the values of these elements may change from time to time, stability of the fundamental elements would facilitate the use of computer programs for the rapid computation of requirements (paragraphs 2d(3) and 2d(4)).

(h) Logistics Guidance for FY 72, in accordance with the new Planning, Programming, and Budgeting System, sets broad objectives and defines responsibilities for materiel support planning, rather than establishing levels of support and identifying the approved force structure to be supported. The Fiscal Guidance that is issued concurrently with Logistics

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Guidance is used by the Joint Chiefs of Staff and the Services to determine proposed forces and levels of support (paragraph 2e).

(i) A valid assessment of the adequacy of FY 72 Logistics Guidance cannot be made until a cycle of the new Planning, Programming, and Budgeting System has been completed (paragraph 2e(3)).

(j) Logistics Guidance was considered in other functional areas studied by the Joint Logistics Review Board. Recommendations concerning Logistics Guidance in relation to these functional areas are contained in the Ammunition Monograph and the War Reserves chapter of this monograph.

(2) Service Procedures

(a) The requirements forecasting procedures for principal items are similar in all Services, in that they originate with Logistics Guidance published by the Secretary of Defense. (See the Supply Management and DSA/GSA Support Monographs for procedures relating to secondary items.) The processes of each Service have three key elements: the computation of gross requirements, the determination of asset position, and the derivation from these two elements of the net or program requirements (paragraph 3a(1)).

(b) Service requirements forecasting processes for principal items were adequate for support of Vietnam (paragraphs 3b(4)(e), 3c(6)(e), 3d(2)(e), and 3e(11)(e)).

(c) The support of Vietnam caused drawdowns of principal items from lower priority forces. In addition, lower priority units were required to continue use of substitute items of equipment (paragraph 3g(2)).

(d) Unforeseen requirements were satisfied by a combination of accelerated production, redistribution of assets, reprogramming, and supplemental budget authorizations (paragraph 3g(3)).

b. Recommendation. The Board recommends that:

(LP-1) The Secretary of Defense guidance concerning logistics be published as stable regulatory documents to facilitate computerized development of materiel requirements. Fundamental elements such as overseas pipeline, post-D-Day safety level, training, and D-to-P authorizations should be stable elements of the Logistics Guidance, although the value for any element may change. Further, when changes to the list of fundamental elements are necessary, they should be published 1 year before the date the Services and Defense agencies have to submit budgets incorporating such changes to the Office of the Secretary of Defense (conclusion (1)(g)2).

CHAPTER V
CONTINGENCY PLANNING

CHAPTER V

CONTINGENCY PLANNING

1. GENERAL

a. Background

(1) Some form of military contingency planning is conducted at virtually every level of command in the Armed Forces. Such planning ranges from prudence on the part of a commander to joint strategic planning conducted in response to threats to the national security. Within this broad spectrum of planning are a multitude of formal and informal planning organizations and systems that are devoted in whole or in part to the development of contingency plans.

(2) The Joint Chiefs of Staff, in complying with the National Security Act, have charged commanders of the unified commands with the responsibility for developing contingency plans. This broad requirement is translated into specific planning tasks by the annual Joint Strategic Capabilities Plan (JSCP). The logistic support aspects of joint contingency plans developed by the commanders of unified commands in response to these specific planning tasks provide the focal point of this chapter.

b. Scope

(1) This chapter will address aspects of planning for the logistic support of joint contingency plans developed in response to the National Security Act of 1947, as amended. Primary emphasis will be placed on the interface between contingency plan logistic support requirements of forces assigned to unified commands and the logistic support capability of the military services. Although oriented toward logistic support of joint contingency plans, certain elements of the total contingency planning system will be analyzed where necessary to establish a framework of reference for logistic support discussions.

(2) Contingency plans of unified commands may extend to include planning for support of allied forces where these forces are planned to be operating in conjunction with U.S. forces in the execution of a contingency plan. The scope of this chapter includes such planning to the extent that principles of planning for logistic support of free world forces are the same as for U.S. forces. The scope of this chapter does not, however, address the intricacies of the interface between the Department of State and the Department of Defense (DOD). This specific area of interest is covered in detail in the Foreign Assistance Monograph, which also provides detailed treatment of foreign assistance contingency planning.

(3) In addition to the interface with Foreign Assistance, Contingency Planning also interfaces with monographs on Financial Management, Production and Procurement, POL, Ammunition, Construction, and Transportation. No attempt will be made, however, to address specifics in those areas; reference should be made to the appropriate monograph for treatment of contingency planning in those functional areas.

c. Definition

(1) Military contingency planning, for the purpose of this chapter, is defined as the process of planning for the full spectrum of possible future military operations by unified commands from a show of force up to and including nonnuclear general war. Specifically excluded from consideration in this study in addition to plans for nuclear war, are multilateral (e.g., NATO, SEATO), civil disturbance, and natural disaster plans, as well as those plans that do not fall within the purview of the DOD.

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(2) Note is taken of the current position of the Joint Staff that the term "contingency" is now associated with plans and planning of the interagency groups of the National Security Council system to denote political and economic plans as well as military plans.

2. PLANNING CONCEPTS

a. Elements of Planning

(1) The contingency planning system is a conglomerate of organizations, systems, subsystems, and processes that vary in their structural relationship to one another from the most tenuous coordination relationship to the strongly formalized relationship associated with military command. The contingency planning process, therefore, must provide the mechanism for establishing a unity of purpose and effort that will direct the efforts of the contingency planning system toward the accomplishment of a common objective. An analysis of the contingency planning process indicates that there are at least seven fundamental elements that collectively provide an integrated structure for the diverse organizational entities of the contingency planning system, insofar as the logistic aspects of contingency planning are concerned. These fundamental elements are:

- (a) Assessment of the contingent threat
- (b) Development of the strategy to counter the threat
- (c) Development of the concepts of operations and logistic support
- (d) Determination of logistic resource requirements
- (e) Determination of the availability of logistic resources
- (f) Execution of a logistic appraisal to correlate resources to requirements and identify capabilities and shortfalls
- (g) Decision to either alleviate shortfalls or accept the shortfalls and modify either the mission, concept of operations, concept of logistic support, or elements of all three.

(2) The interplay of these seven elements is illustrated as follows:

(a) The Joint Chiefs of Staff annually assess the worldwide threat, develop the strategy to counter the threat, and assign major combat forces to the commanders of unified commands to provide the means to execute the strategy within the unified command geographic areas. Concomitantly, the Joint Chiefs of Staff assign contingency operational missions to the commanders of unified commands and require that specific contingency plans be developed to accomplish the assigned tasks and missions.

(b) Commanders of unified commands then develop concepts of operations and broad logistic support concepts, based on assigned major combat forces, in their plans to meet various contingency operations. The component commanders and subordinate or supporting commanders prepare supporting plans in greater detail by expanding on the logistic concept and determining additional combat forces and the logistic support forces required to implement the concept of operations.

(c) The determination of overall logistic requirements for the total force structure and the establishment of an overall resource capability is a function of the Service Planning, Programming, and Budgeting System (PPBS). Logistic appraisals of contingency plans at all echelons within the unified commands should determine if the capability provided through the Service PPBS is adequate to satisfy the logistic support requirements of individual plans or if additional requirements, unique to individual contingency plans, must be satisfied. Finally, a logistic appraisal at the Joint Chiefs of Staff-Service level is necessary to determine

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the supportability of national strategy if more than one operation plan is executed simultaneously and, if critical assets are in short supply, to determine priority of assignment.

(d) The final element involves a feedback loop from the appraisal element to a decision level that can assess the impact of any logistic shortfalls and, if required, can modify the tactical and strategic plan to one that is logically supportable. In addition, this element should be capable of introducing any logistic shortfalls in the form of unique requirements through the appropriate Service acquisition system. Obtaining assets to satisfy these shortfalls should generate a requirement for this feedback loop to report the acquisition of these assets to the appropriate decision level, where a previously restricted contingency plan could be modified to reflect the increased capability.

(1) Military contingency plans are designed to provide a predetermined course of action for which all feasible planning has been conducted. A contingency plan can either be implemented as written or used as a departure point for additional planning, as may be required by existing conditions, at any time a contingent threat becomes a reality. No military contingency planner has knowledge of the date when a contingency plan will be implemented. Thus, military contingency plans are characterized by the aspects of "time is of the essence" and the lack of a predetermined date of implementation. Therefore, the military contingency planner must develop contingency plans that are capable of being executed with resources that are available. This does not preclude other actions to obtain additional resources if the lack of these resources prevents the planner from adopting the desired plan, but it does preclude the existence of realistic contingency plans in any form other than capabilities plans.

(2) Even though a contingency plan must be a capabilities plan to be realistic, the system that produces a capabilities plan must initially consider requirements. To the extent that a commander does not have sufficient organic resources to satisfy all requirements of a plan, the plan is a requirements plan and generates a demand on external resources for the satisfaction of these requirements. If external resources cannot be provided to satisfy all requirements, the plan must be modified to reflect the actual capability made possible by those resources that are available. Unfulfilled requirements should be introduced into an acquisition system to eventually obtain assets and upgrade the applicable plan to reflect increased capabilities.

(3) Thus, in the development of contingency plans as capabilities plans, there is a constant interplay between requirements, assets, and capabilities throughout the development process. Various levels of the contingency planning system are brought into the requirements - assets-capabilities process at different times as the plan moves from its point of origin to its approval as a capabilities plan.

(4) The last four elements of the previously discussed seven elements of planning must be present in any contingency planning system to ensure that the logistic support portion of a contingency plan is based on capabilities. These elements are as follows:

- (a) Determination of logistic resource requirements
- (b) Determination of the availability of logistic resources
- (c) Execution of a logistic appraisal to correlate resources to requirements and identify capabilities and shortfalls
- (d) Decision to either alleviate shortfalls or accept the shortfalls and modify either the mission, concept of operations, concept of logistic support, or elements of all three.

(5) One level of command may be capable of satisfying all four elements in the case of relatively simple contingency plans. Complex plans, such as joint contingency plans developed at the unified command level, are produced by a contingency planning system that does not always have the capability of completely executing each of the four elements. This prevents the establishment of a closed-loop system within the unified command, which in turn generates a requirement for the unified command's system to interface with other elements of the total

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contingency planning system for the accomplishment of these four elements. Each such interface generates a requirement for a communication, coordination, or control loop that must be closed.

(6) The nature of interfaces and relationships existing between elements of the total contingency planning system can best be illustrated by a review of the structure of the organization involved in contingency planning and certain policies and guidelines applicable to logistic contingency planning.

c. Organization

(1) The structure of an organization has a direct influence on the methodology incorporated in any system managed or employed by that organization. In the contingency planning system, the basic organizational structure is based on public law—the National Security Act of 1947, as amended. This act established an organizational structure for DOD that provides for two separate and distinct channels of authority flowing from the President through the Secretary of Defense to the component commanders of the various unified commands. One channel, the operational command channel, runs from the Secretary of Defense through the Joint Chiefs of Staff and commanders of unified commands to the Service component commanders. The second channel flows from the Secretary of Defense through the military departments and the Services to the Service component commanders. The commands included in this channel have the authority and responsibility for all military functions other than operational command. For brevity, however, this channel will be referred to as the logistic support channel. The two-channel structure is depicted in Figure 10.

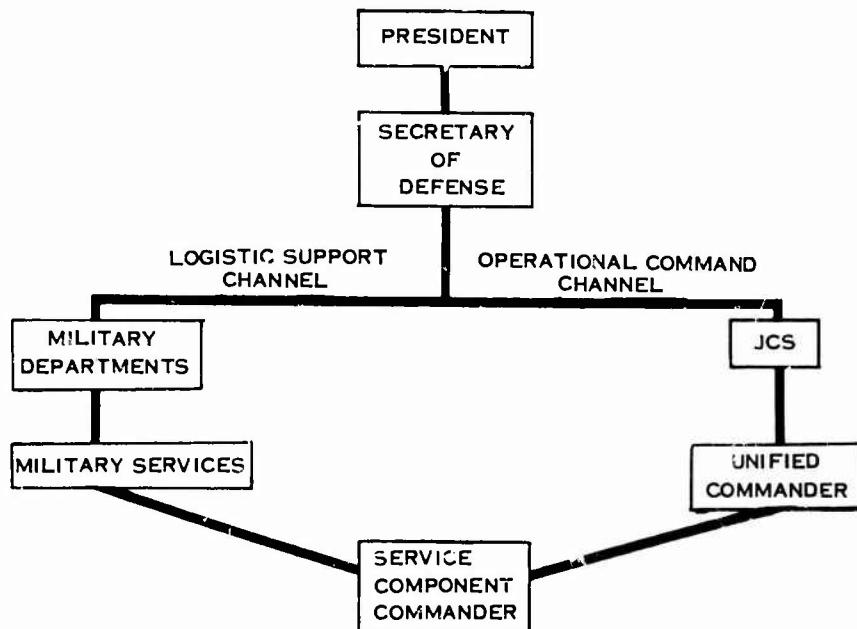


FIGURE 10. DUAL-CHANNEL STRUCTURE OF THE
CONTINGENCY PLANNING SYSTEM

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(2) The operational command channel provides "...for the unified strategic direction of the combatant forces, for their operation under unified command, and for their integration into an efficient team...."¹ This unity of effort among the different Service forces assigned to unified commands is achieved by exercise of operational command, which is defined as:

"Those functions of command involving the composition of subordinate forces, the assignment of tasks, the designation of objectives and the authoritative direction necessary to accomplish the mission. Operational command should be exercised by the use of the assigned normal organizational units through their responsible commanders or through the commanders of subordinate forces established by the commander exercising operational command. It does not include such matters as administration, discipline, internal organization, and unit training, except when a subordinate commander requests assistance."²

(3) The logistic support channel, through the military departments and Services, is responsible for organizing, training, and equipping Service forces, including those assigned to unified commands. This responsibility includes providing logistical support for all forces to include establishing reserves of equipment and supplies for the effective prosecution of war; recommending to the Secretary of Defense logistic guidance that, if implemented, will result in logistic readiness consistent with the approved strategic guidance; and preparing and submitting budgets and administering the resulting funds for maintaining and equipping forces including those assigned to unified commands.³

(4) Conceptually, the operational channel is responsible for the application of military force to implement military strategy by utilizing resources made available by the logistic support channel. Although the military departments and Services have the primary responsibility for logically supporting forces assigned to unified commands, the Joint Chiefs of Staff and commanders of unified commands have certain logistic authority and responsibilities that require interface between the operational command channel and the logistic support channel. The following extracts from DOD Directive 5100.1 and JCS Publications 2 and 3 define the logistic relationships between the two channels:

(a) The Joint Chiefs of Staff are assigned the responsibility for verifying the continuing adequacy of the approved Logistics Guidance and the resources available to the Services to support the general war and contingency plans of the commanders of unified commands. In addition, the Joint Chiefs of Staff have the function of reviewing the plans and programs of the commanders of unified commands to determine their adequacy, feasibility, and suitability for the performance of assigned missions—in short, to conduct logistic appraisals of plans. The Joint Chiefs of Staff also have the responsibility for preparing integrated logistic plans, which may include the assignments of logistic responsibilities to the Armed Forces and the Defense Supply Agency.

(b) Commanders of unified commands are authorized to exercise directive authority within their commands in the field of logistics. This directive authority is intended to ensure the effectiveness and economy of operations and the prevention or elimination of unnecessary duplication of facilities and overlapping of functions among the Service components of a unified command. It is not intended to discontinue Service responsibility for logistic support. The commander of a unified command is also authorized to review requirements of his Service component commanders and coordinate priorities and programs to effectively utilize supplies, facilities, and personnel and to provide a maximum balanced and uniform program to execute his mission. He is also authorized to review the budget-related recommendations from his component commanders to their parent military departments to verify that the recommendations

¹ U.S. Congress, Senate, Committee on Armed Services, National Security Act of 1947, 26 July 1947, as amended through 20 September 1966, Washington, D.C.: Government Printing Office, 1966, p. 1.

² Joint Chiefs of Staff Publication 1, Dictionary of United States Military Terms for Joint Usage, 1 August 1968, p. 155.

³ Department of Defense Directive 5100.1, Functions of the Department of Defense and its Major Components, 31 December 1958, with changes through 17 June 1969, pp. 6, 7.

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are in agreement with his plans and programs. Further, commanders of unified commands are also required to conduct a logistic appraisal of each joint contingency plan. Unified commands are thus directly involved in the determination of logistic requirements, logistic resources, and appraisal of logistic capability to satisfy requirements with available resources.

d. Organizational Interfaces

(1) The organization chart in Figure 10 indicates that a direct interface exists between the two channels of authority at the Service component commander level. This interface provides a communication and coordination link between the dual channels and thereby establishes a closed circuit for the flow of information between elements of the two channels. This closed circuit is particularly valuable in the case of planning for the logistic support of contingency plans because the component commander communicates directly with his chief of Service on matters relating to logistics.⁴ Through this link contingency plan logistic requirements can be made known to the logistic support channel. Also, through this link the Service capability of providing the required logistic support can be made known to the component commander and, through him, to the commander of a unified command. Ultimately, this capability is reported to the Joint Chiefs of Staff in the form of logistic appraisals.

(2) When a unified command's contingency plan is received by the Joint Chiefs of Staff for review and approval, the plan is submitted to the appropriate Services for concurrence or nonconcurrence on the capability of each Service to logically support its component's portion of the plan. This step creates an interface between the Joint Chiefs of Staff and the Services and also results in a closed communication loop in the logistic appraisal process, which brings together the Service-Service component command appraisal, the unified command-Service component command appraisal, and the Service-Joint Chiefs of Staff appraisal. The Service-Joint Chiefs of Staff interface also provides the information and communication channel for conducting an Operation Plan Package Appraisal (OPPA) where contingency plans of more than one unified command are logically appraised to determine if these plans can be executed simultaneously in support of military strategy.

(3) The authority of commanders of unified commands to review the budgets of their component commanders establishes a direct interface between the unified commands and the military departments. This same interface is used in the unified command review of component commands' requirements to ensure effectiveness and economy of operations and to provide a balanced and uniform program in the furtherance of the unified command's mission.

(4) During the development of contingency plans, identification of logistic constraints, limitations, or shortfalls that adversely affect potential mission accomplishment are to be promptly reported by commanders of unified commands to the Joint Chiefs of Staff with information to the Service concerned. The reporting of mission-limiting logistic shortfalls provides a conceptually closed information network: The Service component commander involved communicates directly with his Service in reporting shortfalls; the same information is provided the commander of the applicable unified command who, in turn, reports the shortfalls to the Joint Chiefs of Staff with information to the Service concerned. This information channel provides only for the identification of shortfalls; it does not provide for or ensure that resources will be made available to satisfy the reported shortfalls.

(5) Action to resolve shortfalls identified in the joint contingency planning system is conceptually the responsibility of the Joint Chiefs of Staff. However, since the Joint Chiefs of Staff have no direct capability for funding shortfalls, actual resolution of shortfalls should be accomplished by coordination between the Joint Chiefs of Staff and the Service that has the responsibility for providing logistic support. The result of such resolution may take one or a combination of the following forms:

⁴Joint Chiefs of Staff Publication 2, Unified Action Armed Forces, November 1959, p. 40.

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- (a) The required resources may be made available by reallocation of on-hand assets, or alternative resources may be made available that will minimize or eliminate the limitations imposed by identified shortfalls.
- (b) The required resources may be procured by reprogramming funds.
- (c) The required resources may be entered as a requirement in the PPBS.
- (d) An implicit or explicit decision may be made to take no action. This decision should require making the mission, concept of operations, or concept of logistic support of a contingency plan compatible with the restricted resources actually available.
- (e) Regardless of what action or actions are taken to reconcile shortfalls, the action taken (or not taken) and its results must be communicated back to the appropriate unified and component command for whatever follow-on action may be required. This feedback again provides the closed information network that is essential to the effectiveness of any system.

e. Decision Gap

(1) In those cases where required resource shortfalls cannot be satisfied except by reprogramming of funds or by introducing the shortfalls as requirements in the PPBS, a gap exists in the decisionmaking process responsible for obtaining resources to match requirements. This gap largely results from the different thrusts of the dual channels of authority, which can lead to incompatibilities between the funding priorities established by the Services and the operational requirements for resources as determined by the Joint Chiefs of Staff and commanders of unified commands. The problem is essentially twofold: first, the primary effort of the LOGISTIC SUPPORT CHANNEL is being directed toward providing logistic resources for the total force structure based mainly on level-of-effort planning factors; and, second, the primary effort of the OPERATIONAL COMMAND CHANNEL is being directed toward obtaining resources to match mission-related requirements. These requirements include unique requirements applicable in quantity and type to theater or specific contingency plan requirements.

(2) For differentiation between these two types of resources, the materiel reserves based on the composition of the approved forces included in the Five Year Defense Program (FYDP) will be identified as "Force Structure War Reserves" and the materiel reserves associated with the unique requirements of contingency plans will be termed "Special Contingency War Reserves." These two terms will be used throughout this chapter, even though they are not officially recognized at present. A detailed discussion, conclusion, and recommendation concerning the future official use of these terms is contained in Chapter VI.

(3) Requirements for Special Contingency War Reserves are derived from specific environmental features of an objective area, time-distance factors from supporting bases, mission assigned to include interservice support agreements among component commands, concept of operations, nature of the enemy, and type of warfare envisioned. Each of these specific conditions is typified by its exclusion from the criteria used by the Services in defining requirements for Force Structure War Reserves.

(4) Special Contingency War Reserves are therefore additive to Force Structure War Reserves determined by the Services as required to support the approved forces and planned for acquisition routinely through the Services' PPBS. The unique requirements for Special Contingency War Reserves must meet the test of credibility to ensure that shortfalls required to implement military strategy are included with requirements generated in the logistic support channel. To attain the required degree of credibility, requirements for Special Contingency War Reserves must be presented in a manner that clearly indicates the risk to national security if they are not recognized as valid requirements for acquisition through the PPBS.

(5) The methodology for selecting credible hard-core requirements for Special Contingency War Reserves—in effect, closing the resource-shortfall loop depicted in Figure 11—is the subject of paragraph 3d(2)(c).

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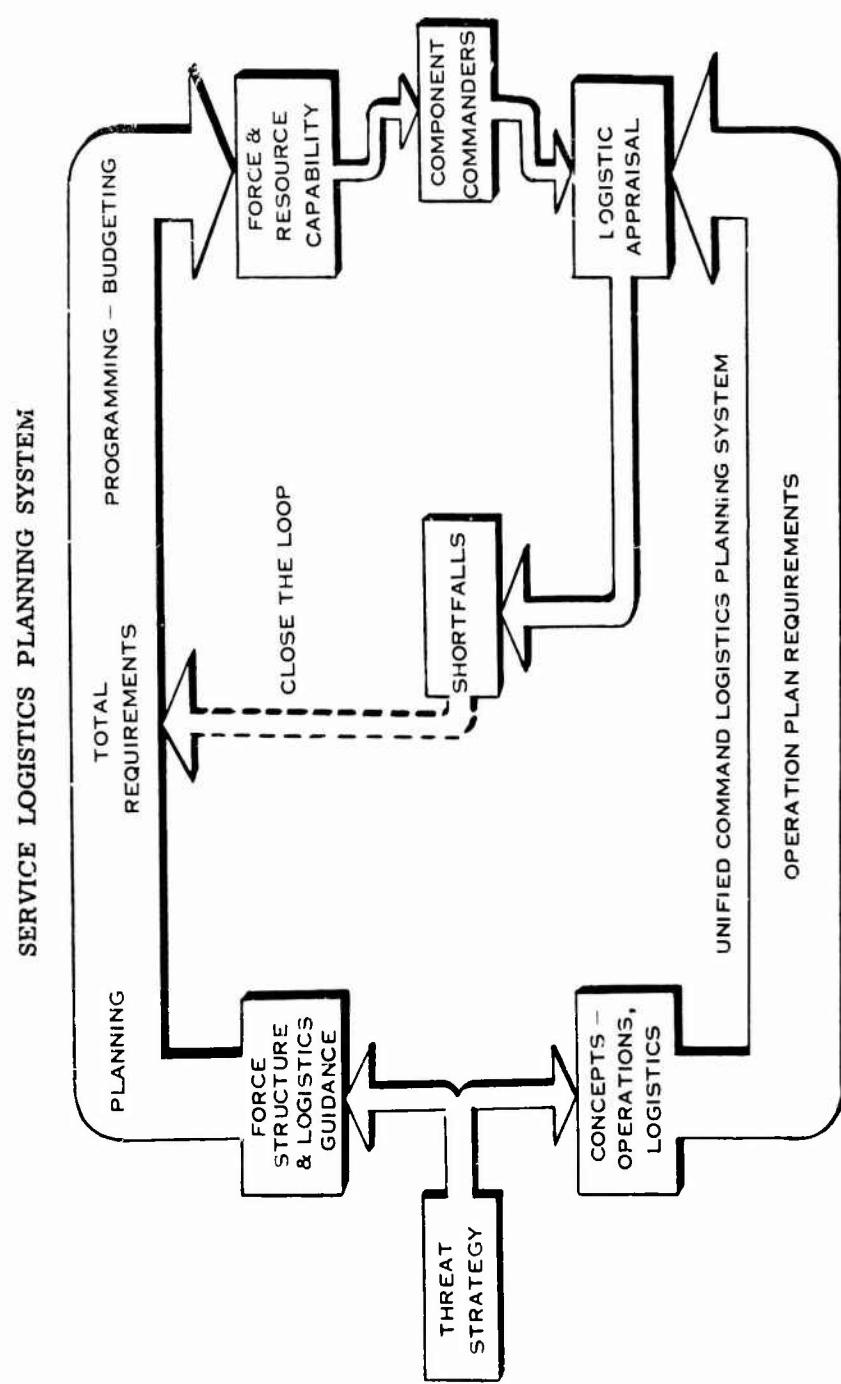


FIGURE 11. ALLEVIATION OF SHORTFALLS

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3. ALLEVIATION OF SHORTFALLS

a. Vietnam Logistics Planning

(1) Except for failure to act to overcome or accommodate certain logistic shortfalls, logistics planning for operations in Vietnam demonstrated the basic soundness of the dual-channel logistics planning process under contingency situations. Prior to 1 January 1965, the contingency plan for SE Asia operations had been logically appraised and several shortfalls were identified. With an increase in the tempo of operations planned in January 1965, a more-detailed logistic appraisal was conducted by the Joint Chiefs of Staff in conjunction with the Services and more positive action was taken to be prepared for sustained operations. As addressed in the Requirements Forecasting, War Reserves, and Industrial Mobilization Planning chapters and other monographs:

(a) There must be good coordination between the unified command and Service logistics planning systems if effective logistic support is to be effected for contingency operations.

(b) The logistics planning process is geared to acquire war reserves on a total force structure basis; the unique requirements of contingency plans generally are not given adequate recognition until implementation of a specific plan is imminent.

(c) If military strategy, as defined in the JSCP, calls for simultaneous execution of more than one contingency plan, and funding for an actual contingency is limited by national economic or political factors, then drawdowns of war reserves allocated for other contingencies will jeopardize the supportability of military strategy.

(2) In short, Vietnam operations demonstrated the need to ensure that hard-core Special Contingency War Reserve requirements generated in the unified command logistics planning system are positively addressed in the Service PPBS within the framework of the total Force Structure War Reserve requirements.

b. Current Planning Problems

(1) The satisfaction of Special Contingency War Reserve requirements is delineated in JCS Publication 2 as a joint responsibility of the Joint Chiefs of Staff, the Services, and the commanders of the unified commands (through their component commanders).

(a) The Joint Chiefs of Staff "...will prepare and submit to the Secretary of Defense, for information and consideration in connection with the preparation of budgets, statements of military requirements based upon... strategic war plans."⁵

(b) "The budget submissions to the Secretary of Defense by the military departments shall be prepared on the basis... of the advice of commanders of forces assigned to unified... commands; such advice, in the case of component commanders of unified commands, will be in agreement with the plans and programs of the respective unified commanders."⁶

(c) The commander of a unified command will "review the recommendations bearing on the budget from the component commanders to their parent Military Departments to verify that the recommendations are in agreement with his plans and programs."⁷

(2) Although it would appear that the responsibilities are clear, in actual practice the unified command Special Contingency War Reserve requirements are not identified in many

⁵Ibid., p. 12.

⁶Ibid., p. 16.

⁷Ibid., p. 32.

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cases or, if identified, are not actually satisfied in the Service channel. An analysis of the contingency planning process reveals several reasons for this planning shortcoming.

(a) First is the workload imposed on the planning staffs. As an example, CINCPAC has about 30 contingency plans supported by about 110 first-echelon (component commander and subordinate unified commander) plans. The annual review of these contingency plans alone would require the planning staff of the Commander in Chief, Pacific (CINCPAC), to review a plan every 2-1/2 days (140 total plans). This schedule does not make any provision for developing new plans or conducting additional reviews as a result of a change in forces assigned, as may be indicated in the semiannual update of the JSCP. As an example of the workload to develop new plans, a recent study conducted by CINCPAC indicated that it would take planning staffs at all levels within the Pacific Command about 1-1/2 years to process one unified command contingency plan and its supporting plans through the planning sequence from concept to final approval.

(b) Second is the problem of establishing the credibility of Special Contingency War Reserve requirements derived from a large number of contingency plans. The probability that any one plan will be implemented varies from the least to the highest probable. Developing substantive justification for total requirements for all plans results in a dissipation of effort that could be better concentrated on only those plans that meet certain critical criteria.

(c) Third is the increase in the amount of detail demanded from the contingency planning process at all echelons. This increased detail is precipitated by the impact of automatic data processing (ADP) on the planning process. Used properly, ADP can be a valuable planning tool. However, current experience indicates a trend toward generation of excessive detail, which serves only to slow down the planning effort.

(d) Fourth is the lack of an adequate exchange of logistic data at all echelons within the dual-channel command structure. This situation leads planners to make invalid assumptions that result in unrealistic logistic appraisals. The following assumptions extracted from contingency plans underscore this fact.

1. Necessary bases, facilities, and services will be made available.
2. Necessary logistical resources, including forces to support available operational forces, will be provided from the continental United States as required.
3. Transportation to implement this plan is beyond the capability of the assigned forces to provide, but it will be made available as required.

(3) The end result is that the capability to ascertain the logistic readiness to simultaneously execute two or more contingency plans in support of JSCP-enunciated military strategy cannot be accurately assessed. The key element in this process is the logistic appraisal of contingency plans. Perhaps the greatest lesson learned by logistic planners as a result of Vietnam operations was the value of logistic appraisals. Logistic appraisals force planners to compute realistic requirements and to carefully estimate available assets, especially when drawdowns are contemplated from resources allocated to other unified commands. However, as was pointed out previously, the identification of shortfalls does not necessarily ensure that they are satisfied.

(4) In an effort to develop a standard methodology to evaluate the impact of shortfalls on the readiness to execute national strategy, the Joint Chiefs of Staff, in 1967, directed that a package appraisal of the capability to continue to support operations in SE Asia be conducted in conjunction with a hypothetical implementation of a European contingency plan. The appraisal proved to be inconclusive, mainly because the fluid situation in SE Asia resulted in frequent changes in asset availability and precluded establishing a firm baseline from which to obtain a quantitative measurement of unique requirements. Also, the major logistic shortfalls that were identified were not satisfied. In 1968, incident to another planned increase in the tempo of operations in SE Asia, the PUEBLO crisis triggered another need for a worldwide logistic posture appraisal so that alternative responses could be assessed. This package appraisal was

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more realistic than the previous one and cited Special Contingency War Reserve requirements that would have to be satisfied if military strategy was to be supported. Again, these shortfalls were never satisfied.

(5) These examples are cited to support the hypothesis that contingency planning, while generally sound, presents problems in three essential areas:

(a) The workload currently imposed on logistics planning staffs at all levels inhibits the development of timely, accurate contingency plans that effectively address unique requirements.

(b) The trend toward providing too much detail in contingency plans compounds the planning workload problem.

(c) There is currently no practical way to ensure that hard-core war reserve requirements that impact on supportability of national strategy are satisfied.

c. Proposed Procedures

(1) The Joint Chiefs of Staff have long recognized these planning problems and are currently developing a Joint Operation Planning System (JOPS) to break logistics planning for contingencies into manageable segments. The JOPS proposes to divide contingency plans into two types of plans:

(a) Complete plans (OPLANS), which will be prepared for only those contingency situations where execution will tax total resources (either force, logistic, or mobility) available to support the plan or will be likely to occur within the Joint Strategic Capabilities Plan (JSCP) time frame.

(b) Concept plans (CONPLANS), which will be abbreviated plans that will be fully developed when necessary. Complete plans will be developed in full detail and the review process will analyze logistic support capabilities and requirements.

(2) Two types of reviews are provided:

(a) Individual plan review for each OPLAN.

(b) Review of a designated set of OPLANS in an OPPA, which will test the feasibility of concurrent execution of the two or more plans in the set.

(3) The package appraisal process (OPPA) called for under JOPS will identify hard-core Special Contingency War Reserve requirements that would be additive to the total Force Structure War Reserve requirements computed and funded in the Service channel. Although the JOPS concept would significantly improve the contingency planning process, the following improvements are also required to effectively respond to contingency situations:

(a) Reduce the degree of ADP detail to be addressed at each echelon to that level that is manageable and is required to make broad judgments.

(b) Strengthen the procedures for follow-through action to satisfy those hard-core Special Contingency War Reserve requirements needed to support military strategy as defined in the JSCP.

(4) The JOPS concept requires effective ADP support for implementation. An integrated Joint Automated Planning Support System (JAPSS) is under development for use by the Joint Staff, the unified commands, the component commands, and the Services in accomplishing the planning tasks. The objective is to ensure efficient collection and storage of accurate and timely data in a form readily accessible for rapid retrieval and display. Although the JAPSS was originally part of the JOPS concept, because of difficulties in getting agreement by all

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echelons of planning as to the degree of detail to be managed at each level, JAPSS is being developed separately from the JOPS. It is anticipated that JOPS will be implemented in the near future. Pending resolution of JAPSS procedures, logistic information systems currently in being will be used to support planning within the JOPS when approved for use.

d. Summary

(1) In the final analysis, the contingency planning process, as evidenced in the logistics planning accomplished for Vietnam operations, is basically sound, flexible, and capable of rapid expansion to meet wartime requirements. However, because of the different thrusts of the dual channels of authority—i.e., operational in the unified command channel and logistic in the Service channel—coordination of the separate, but related, logistics planning efforts is necessary to achieve better contingency planning.

(2) The analysis of Vietnam operations, current responsibilities, and proposed procedures show that improvements can be made in three essential areas.

(a) Reduce the planning workload to an acceptable level. The proposed JOPS, when implemented, will accomplish this reduction by dividing the large number of contingency plans into two groups: complete operation plans and concept operation plans. Complete, detailed planning, including logistic appraisals, will be minimized and accomplished only for the contingency plans that meet the criteria outlined in paragraph 3c(1)(a).

(b) Stop the trend toward requiring too much detail, particularly in the application of ADP techniques in the logistic appraisal process. The JOPS concept calls for extensive use of ADP. Both channels recognize the necessity for a system that is workable and can respond to the needs of both channels without excessive detail.

(c) Provide a higher degree of positive follow-through action to ensure that the minimum hard-core Special Contingency War Reserve requirements are recognized to support military strategy as postulated in the JSCP. These hard-core requirements would be developed through OPPA and would be additive to the total Force Structure War Reserve requirements and addressed in the PPBS. If the national economic or political situation or higher Service priority precludes funding, these shortfalls should remain as valid, hard-core requirements. The shortfall war reserves identified in the logistic appraisals of the other complete plans not identified in the OPPA should also be recognized as credible requirements, added to hard-core requirements associated with the OPPA to establish total Special Contingency War Reserve requirements, and given requisite consideration in the PPBS.

4. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) An analysis of the planning for Vietnam operations indicates that the operation plans in being for SE Asia operations identified shortfalls that would impact on the concept of operations. However, action had not been taken to alleviate all the shortfalls identified prior to the execution of combat operations. Shortfalls resulted in the failure to develop a logistic capability as rapidly as possible and also resulted in drawdowns of resources from noncommitted forces, which degraded their readiness to carry out contingency missions (paragraph 3).

(2) Current procedures, as well as those proposed in the Joint Operation Planning System, provide only that recommendations be submitted to the Secretary of Defense by the Joint Chiefs of Staff for actions to be taken to acquire requisite resources. A higher degree of positive, follow-through action is required to better ensure that shortfalls adversely affecting the capability of the Active Forces to execute their missions under the national strategy are alleviated (paragraph 3).

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(3) For maximum effectiveness, planning for the logistic aspects of contingency plans should include:

(a) Planning to establish a desired military posture by developing credible Special Contingency War Reserve requirements that would be additive to the total Force Structure War Reserve requirements and recognized by the Services in the Planning, Programming, and Budgeting System (paragraph 3).

(b) Modification of contingency plans as may be required to reduce the objectives to those that are compatible with available resources or funding; or to reflect the increased capability to attain objectives resulting from increased assets (paragraph 2).

(4) Accomplishing the complete, detailed planning currently required for the multiplicity of operation plans in being is not feasible because the administrative workload is prohibitive. The proposed Joint Operation Planning System, as currently being developed by the Joint Chiefs of Staff, will minimize the number of operation plans that must be prepared in complete detail. The Joint Operation Planning System concept calls for complete planning to be accomplished for those operation plans that are likely to be executed within the Joint Strategic Capabilities Plan time frame or that, if individually implemented, would tax the total available resources (forces, logistic, or mobility). These complete plans will be designated in the Joint Strategic Capabilities Plan and will require development of logistic annexes in full detail and the execution of a detailed logistic appraisal. The remainder of contingency plans will be designated as concept plans and will be prepared in an abbreviated format that will require expansion into a complete plan prior to implementation (paragraph 3).

(5) A package of complete operation plans will be designated for the annual Operation Plan Package Appraisal. This package of plans should be used to establish a base of Special Contingency War Reserve requirements which are additive to the war reserves required to support the Force Structure. When the requirements of each complete plan not included in the package are compared with on-hand or programmed resources, additional Special Contingency War Reserve Requirements may be generated (paragraph 3).

(6) Planning for the Vietnam operation demonstrated that there must be timely and effective coordination between all echelons of planning to include the exchange of logistic data. The criteria for such a logistic information network should incorporate the elements of simplicity and timely responsiveness with minimum detail and should make good use of automatic data processing techniques. Even though the proposed Joint Automated Planning Support System under development by the Joint Chiefs of Staff is intended to meet these criteria, the present format requires considerable detailed information and may pose prohibitive administrative problems to maintain current data. The Joint Chiefs of Staff and the Services are currently addressing this problem (paragraph 3).

b. Recommendations. The Board recommends that:

(LP-2) The Joint Chiefs of Staff, in coordination with the Services, expedite the implementation of the proposed procedures currently under development in the Joint Operation Planning System (conclusions (2), (3), (4), and (5)).

(LP-3) The Joint Chiefs of Staff and the Services use those contingency plans, designated as complete plans, as follows:

(a) The critical shortfalls identified in those complete operation plans designated to undergo an Operation Plan Package Appraisal to determine logistic supportability should be validated as credible hard-core Special Contingency War Reserve requirements. These requirements would be additive to the total Force Structure War Reserve requirements and be recognized by the Department of Defense in the Planning, Programming, and Budgeting System. If the economic or political situation or higher Service priorities preclude funding, then the requirement should remain valid until satisfied.

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(b) The logistic requirements of those complete operation plans that are not in the designated package will be compared with logistic assets, on hand or programmed, to establish additional Special Contingency War Reserve requirements, which should also be considered for additional support under the Planning, Programming, and Budgeting System (conclusions (3), (4), and (5)).

(LP-4) The Joint Chiefs of Staff, in coordination with the Services, expedite the development of an automated contingency reporting system (a refinement of the proposed Joint Automated Planning Support System) to provide reporting of essential logistic data on which to base broad management judgments in the logistic appraisal process (conclusion (6)).

CHAPTER VI
WAR RESERVES

CHAPTER VI

WAR RESERVES

1. BACKGROUND

a. The United States was unprepared for the commencement of hostilities in World War II, mainly because of the time-distance factor separating the United States from potential enemies and our national policy of avoiding foreign entanglements. To buy time to build an industrial base, it was necessary to curtail military operations until supplies and equipment became available.

b. The reduced time-distance factor and the international political situation at the close of World War II indicated to prudent military planners the necessity to formally establish, and maintain in peacetime, stocks of materiel to support combat operations until the national production base could be activated. The initial war reserves consisted almost exclusively of materiel that was procured during World War II. These war reserves represented the bulk of the supplies and equipment available at the outset of the Korean War. Procurement during the Korean War again outstripped consumption and considerable quantities of military supplies remained at the close of hostilities. These materiel were the basis for the reconstitution of war reserves subsequent to the Korean War.

c. Thus, the war reserves have largely consisted of surplus materiel that, fortunately, was generated by U.S. production base as a result of U.S. inability to accurately predict the end of hostilities. Based on funding history, without those assets the United States would have had very few reserves. However, this method of replenishment and/or maintenance of war reserves has certain rather obvious drawbacks. First, it is inefficient, since the supplies thus generated and accumulated do not necessarily correspond to any known or predicted requirements. Second, these stocks can often become a budgetary liability when they are retained as assets beyond their economical or technical lifespan and by their very existence, make funding for replacement difficult. Third, since these materiel are essentially procured at one point in time, those that are subject to deterioration reach their optimum storage life at the same time. Accordingly, the application of proper management techniques is complicated.

d. At each succeeding level of sophistication of weaponry and supporting systems, the necessity for this reserve stockpile becomes more absolute. Further, since production lead times generally increase in direct proportion to the degree of sophistication of the items to be supported, the range and depth of the stockpile tend to increase. It is this stockpile in each of the Services and the Defense Supply Agency (DSA) to which this chapter addresses itself.

2. STUDY OBJECTIVES AND METHODOLOGY

a. The goals of this chapter are to identify strengths and weaknesses experienced in the Vietnam buildup and to make recommendations that will materially improve the management of war reserves within the Department of Defense (DOD).

b. Research was conducted by examining documentation at each level of DOD activity from the Logistics Guidance through the directives for operation at service-unit level. Interviews were conducted with key war reserve logistic personnel at selected activities representing each major echelon of the military services in the United States, Europe, and the Pacific Command to obtain their knowledge of strengths and weaknesses of current systems and ideas of improved concepts.

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3. SCOPE

- a. For the purpose of this study the term "war reserves" is considered as generically encompassing the multiplicity of "mobilization reserve" terms in JCS Publication 1, the DSA "Study of Mobilization Management of Secondary Items," and any other war reserve or mobilization reserve terms now being used for requirements computation and programming by the various Defense agencies that were encountered during research.
- b. In addition, the terms "war reserves" and "mobilization reserves" are considered as referring to the Approved Force Mobilization Acquisition Objectives, which are defined in DOD Instruction 4140.24 as the quantity of supplies required, in addition to the peacetime assets normally available on any given date, to equip and support the approved force structure in accordance with current Logistics Guidance.
- c. This chapter will provide a review of the Logistics Guidance as it applies to acquisition and maintenance of war reserves. Also included is a comparative analysis of desirable criteria of the systems established by each of the military services and DSA to acquire, manage, and maintain those reserves.
- d. Since the Nuclear Deterrent Forces, i.e., Strategic Air Command and the fleet ballistic missile submarines operate essentially on a wartime footing, those organizations have been specifically excluded from consideration in the chapter. Further, this chapter addresses overall war reserve programs. Detailed information about specific items within the Services' war reserves are contained in Ammunition, Petroleum, Oil, Lubricants (POL), Construction, Communications, DSA/GSA Support, and Supply Management monographs.

4. SELECTION CRITERIA FOR WAR RESERVES

- a. DOD has established the following criteria for items selected for war reserves:¹
 - (1) Items that would be required for the survival of personnel.
 - (2) Items essential for the operational effectiveness of combat, combat support, and combat service support forces.
 - (3) Items essential for the operational effectiveness of the logistic system in support of combat forces.
 - (4) Items without which the operational effectiveness of essential equipment or weapon systems would be inoperative or seriously impaired.
 - (5) Items essential for the support of civil affairs and prisoners of war.
 - (6) Items essential for initially equipping, housing, and training those Reserve forces approved by the Logistics Guidance (for support of a sudden callup of Reserve forces).
- b. The following items will not be selected for war reserves:
 - (1) Items solely for comfort, convenience, or morale.
 - (2) Items not currently stocked that are planned for procurement after the assumed M-Day.
 - (3) Items that are or will become nonstandard within the approved planning period, except when the end item supported can be used as an applicable substitute for the standard item that will not be available.

¹Department of Defense Directive 3005.5, Criteria for Selection of Mobilization Reserve Items, 8 November 1965, as amended.

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(4) Items that can be readily fabricated in the field with tools and bulk materiel normally available.

(5) Subsistence items, except for operational rations.

(6) Items normally available from commercial sources in sufficient quantities to meet war reserve military demands. Exception will be permitted when military considerations indicate that commercial-type items must be pre-positioned prior to the assumed M-Day.

(7) Items that have short shelf-lives. Certain short shelf-life items can be selected when overriding military effectiveness considerations prevail.

5. WAR RESERVE SYSTEMS

a. Army

(1) Categories of War Reserve Materiel. The Army has established that war reserve stocks will include essential items to meet the following:

- (a) General Mobilization Reserve Requirements
- (b) Theater War Reserve Levels
- (c) Operational Projects
- (d) Contingency Plans.

(2) Responsibilities for Each Category of Materiel

(a) General Mobilization Reserve Requirements. The stockage levels for general mobilization reserve requirements are based on annual Logistics Guidance and disseminated by the Department of the Army (DA) Materiel Policy and Guidance publication. Utilizing the guidance and force structure provided by DA, the national inventory control points (NICPs) develop and compute the general mobilization reserve requirements. The requirements are then submitted to the Army Materiel Command (AMC), where they are reviewed and consolidated. The AMC then includes the net shortages as part of the annual budget estimates. It is to be noted that mobilization reserve deficiencies are defended separately from normal peacetime operating requirements, and funds are also allocated and identified separately. Although general mobilization requirements are computed annually and funds are requested annually to meet the Army reserve stockage objective, the funds provided are generally only a small percentage of the funds needed.

(b) Theater War Reserve Levels. By 31 January of each year DA provides AMC, Strategic Communications Command (STRATCOM), and The Surgeon General (TSG) with the troop force structure to use in computing war reserve requirements for theater war reserve levels. These commands are required to compute requirements for established levels prescribed in Army Regulation (AR) 11-11 and forward these computations to each overseas command by 30 June of each year. Each overseas commander reviews the computed requirements and, by 31 October of each year, has reconciled differences and advised AMC, STRATCOM, and TSG of his concurrence. Once the overseas commander determines his computed requirement, he is required to determine the net shortage and to include a request of funds to cover this shortage in the budget he submits to DA. If war reserve funds are approved, DA will allocate funds directly to the overseas commander, who in turn will requisition and stock the item(s) within the command. Assets for theater war reserves are required to be accounted for separately from peacetime inventories.

(c) Operational Projects. These projects are authorized for major commanders to acquire materiel for theater or CONUS stockage for the purpose of supporting specific

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contingency operations and/or war reserve plans for a specific geographic area. Operational projects require DA approval.

(d) Contingency Plans. AMC computes detailed line item requirements for selected contingency plans involving the deployment of continental United States (CONUS) augmentation forces and, as required, theater forces. These requirements are predicated on the plan of the Army component commander, which in turn supports the approved unified command plan.

(3) Maintenance of War Reserve Materiel. The physical maintenance of war reserve equipment is inherent to the Army supply system. The command responsible is required to budget for the necessary resources and perform the necessary maintenance.

(4) Application of War Reserve Materiel. Current guidance authorizes the Deputy Chief of Staff for Logistics (DCSLOG) to release for issue Procurement of Equipment and Missiles, Army (PEMA), items on a case-by-case basis. Further, appropriate commands and agencies are authorized to release for issue mobilization reserve repair parts for operational demands, providing the items are due in from procurement and/or requisitions within 90 days for CONUS sources and 120 days for overseas commands. Army regulation provides for the use of a blotter record to record the issue of mobilization reserve stocks to satisfy peacetime demands. However, regardless of its accuracy, the constant breakdown of stocks adversely affects computed levels and mobilization reserve responsiveness. Considering that funds earmarked for mobilization reserve items are not always available, replenishment of drawdown mobilization reserve stocks must be funded with available Army Stock Fund (ASF) resources.

(5) Reporting Procedures. The Army does not currently have a separate reporting system for war reserves. However, the overall reporting system includes data that are used for war reserve planning. The reporting system requires that principal items be reported by all active Army, Army Reserve, and National Guard units. The reports are submitted to the AMC Major Item Data Agency (MIDA) located at Chambersburg, Pennsylvania. Depot stock assets in CONUS and overseas (including operational projects) are also reported to MIDA. Thus, the Army has principal item visibility on a worldwide basis. The data are utilized to determine war reserve capability for any force structure or any contingency plan. In addition, the Army has worldwide reports on high-dollar secondary items. These reports are submitted to the respective NICPs and utilized for any purpose.

(6) Summary. The foregoing is a brief description of how the Army Mobilization Reserve System operates in CONUS and overseas. The system is not separate and distinct, but is part of the overall Army logistic system. In other words, the Army Mobilization Reserve System is interwoven with all facets of supply management.

b. Navy

(1) General

(a) The fleets are always mobilized for combat and/or additional worldwide deployment in peacetime, although the number of forces immediately available at a given time will vary. Fleet force-in-readiness is maintained by keeping forces continuously at sea throughout the world and by ensuring their endurance capability at all times by maintaining adequate peacetime operating and war reserve stocks on hand.

(b) The Navy war reserve system supports the governing wartime logistic support policy objectives:

1. The deployed fleets will be self-sufficient to permit their operations in combat from 90 to 180 days without resupply from CONUS.

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2. Initial combat operations will be supported to the maximum extent possible by resources in being, until forces with initial assignments have completed their missions or until resupply can be effected.

3. Maximum dependency will be placed on resupply afloat, with minimum reliance placed on a few fixed installations ashore and supporting shipping.

4. Sufficient war reserve stocks will be pre-positioned in the Mobile Logistic Support Forces (MLSF) and ashore at a few fixed bases to augment initial ship allowances and to sustain forces until missions are completed or resupply can be effected. Provision is made for the establishment of appropriate advanced base facilities.

(c) Basic policy concerning the wartime logistic support objectives in paragraph (b) and the following categories of Navy war reserves are in the Navy Support Plan (NSP). The NSP also lists the Office of the Chief of Naval Operations (OPNAV) Instructions applicable to each Chief of Naval Operations (CNO) Special Project and the Advanced Base Functional Components (ABFCs). Additional references are OPNAV Instruction 4441.12 and Naval Supply Systems Command (NAVSUP) Instructions 4440.125 and 04440.47H.

(2) Categories of War Reserves

(a) The CNO Special Projects authorize the acquisition and holding of pre-positioned war reserve stocks (PWRS) in readiness as a source of combat-ready selected supplies and equipment capable of sustaining naval forces in combat or other emergencies pending arrival of replenishment. They require that such PWRS be pre-positioned prior to hostilities at or near the point of planned use to ensure timely support of a fleet commander's wartime force or project. Such pre-positioning includes both physical distribution (e.g., ashore in CONUS, on-board MLSF ships, and at overseas bases) and protection in the NAVSUP computers against unauthorized issue. The code name and purpose of these projects are as follows:

1. Cloud—To ensure Navy materiel readiness for initial support of Atlantic Fleet Marine Force (FMF) units upon their deployment overseas

2. Storm—To ensure Navy materiel readiness for initial support of Pacific FMF units upon their deployment overseas

3. Hail—To ensure Navy materiel readiness for initial support of the 4th Marine Division/Wing Team upon its mobilization and deployment overseas

4. Hurricane-Typhoon—To provide materiel readiness for logistic support of the Atlantic Fleet (Hurricane) and Pacific Fleet (Typhoon)

5. MSTS/Merchant Ship Outfitting—To provide logistic support for equipping Military Sea Transportation Service (MSTS) and/or merchant ships in time of national emergency

6. Medical Support Materiel—To provide essential medical support materiel to the fleet commanders in chief in time of national emergency.

(b) The ABFC system is an important part of determining war reserve requirements. The principal use of ABFCs is in the Overseas Base Element of CNO Special Project Hurricane/Typhoon; however, they also support seven other projects and elements. An ABFC is a grouping of personnel and/or material designed to perform one of the specific tasks of an advanced base. A functional component contains the technical personnel and the technical equipment necessary for the performance of its tasks, including, as pertinent, workshop housing, vehicles, boats, shop and office equipment and a 30-90-day initial supply of consumables. Tailored ABFCs may be grouped and so arranged as to establish an advanced base such as a repair base, supply base, airfield, air base, medium all-purpose naval base, small all-purpose naval base, or any type of naval shore establishment at an overseas location.

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(c) There are over 320 ABFCs in the following broad categories: (A) Administration; (P) Harbor Control and Defense; (C) Communications; (D) Supply; (E) Ship and Boat Repair; (F) Cargo Handling; (G) Medical and Dental; (H) Aviation; (J) Ordnance; (N) Camp and Welfare; and (P) Construction and Public Works.

(d) DOD Instruction 4140.24 specifies the stratification of two categories of war reserves, pre-positioned war reserves and other acquisition war reserves. Under the second category, the Navy includes war reserves for:

1. Mobile construction battalions, Active and Reserve
2. Selected Reserve ships, categories A and B
3. Selected Reserve aircraft, category B.

Category A units are Naval Reserve training ships in a high degree of readiness for joining the fleet on short notice. Category B units are inactive ships and aircraft in the first priority of those to be activated. In the case of ships, the majority of items are repair parts, replacement assemblies, and nondeteriorative allowance list items that have been removed from category B Reserve ships. Also included in the Navy's other acquisition war reserve requirements (OAWRR) are the reserve stocks that would be required over and above those in Special Projects to provide D-to-P assets for the Active Fleet and the above Selected Reserve units after activation. Because of the lower priority, there has been no budgeting for new acquisitions of OAWRR items.

(3) Application of War Reserve Materiel. Governing policy requires that the equipment and/or materiel in the CNO Special Projects, including the ABFCs, be released by the direction of CNO. When an ABFC is ordered by a fleet commander, certain materials must be drawn from stock or acquired from transfer or purchase, since only a portion of materiel is stockpiled. ABFC personnel requirements are not in being and must be filled by drawdowns from units, stations, recruitment, and/or recall of Reserves.

(4) Reporting Procedures. Currently, Navy commands with responsibilities for war reserve planning, procurement or stock retention provide inputs to two basic war reserve status reports that are submitted semiannually to the Chief of Naval Material (CNM), CNO, and the fleet commanders. The final development phase of one of these reports, the "Pre-Positioned War Reserve Interrogation and Readiness System," which covers the CNO Special Projects less the ABFCs, is scheduled in the current year. The January 1970 issue of the other report that covers the ABFCs provides information on the location, major material deficiencies, total dollar values, value of deficiencies, and operational readiness of each of the ABFCs.

(5) Summary. Navy war reserve planning and actions are governed by and responsive to CNO logistic support policy, which requires the continuing maintenance in peacetime of balanced fleet readiness that will ensure capabilities for rapid fleet deployment, combat effectiveness, and endurance in emergencies or wartime. War reserve planning and actions are grouped by special projects but are not constituted as a separate program within the Navy. They are an integral part of day-to-day force level and logistics planning, programming, and supply actions involved in such things as ship and aircraft acquisitions and maintenance and fleet supply support. The Release of stocks is controlled by CNO.

c. Marine Corps

(1) General. The concept under which Marine Corps war reserves are justified and organized is that of a force in being, subject to deployment in any contingency to any location. Accordingly, the reserves are not tied to or predicated on support of any specified operations or contingency plan(s). This concept is recognized by the Secretary of Defense, and the FY 70 Logistics Guidance authorizes the Marine Corps to procure and maintain a 6-month supply of all stocks for four Marine divisions and air wings, plus additional stocks to permit two divisions and wings to fight indefinitely in a counterinsurgency environment without drawing down the assets of the other divisions or the Army.

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(2) War Reserve Categories. War reserves are broken into two separate categories:

(a) Reserves to support aircraft and aircraft support equipment. (These are funded for and provided by the Navy in essentially the same manner and under the same system as was described for Navy war reserves.)

(b) Reserves for the ground element of the Marine Corps and the Marine Corps common supplies and equipment for the Air Wing. The Marine Corps reserve program as discussed here applies only to this category of war reserves. Basically, two classes of war reserves have been established in the Marine Corps: project stocks and general mobilization reserves.

1. Project stocks are divided into three groups and given the same code names as CNO Special Projects. Project stocks used to support the forces assigned to FMF Atlantic are called "Cloud"; FMF Pacific, "Storm"; 4th Marine Expeditionary Force, "Hail." Each of the project stock groups is further broken down into 30-day increments of combat support called blocks. These increments are identified as mount-out, mount-out augmentation, and automatic resupply blocks. The mount-out block is computed, bought out of stock, and held by the combat unit (normally at battalion level). This block goes wherever and whenever the unit goes. The mount-out augmentation block is a second 30-day block of combat support that is bought out of the stores system and pre-positioned with the service support unit responsible for support of the combat unit for whom the block is tailored. The automatic resupply block is retained as protected stock within the Marine Corps depot stocks or is identified as time-phased requirements to the Navy or DSA. These automatic resupply blocks are covered by computer programs that permit their packaging and shipment in 30-day increments to fit any possible combination of Marine Corps units without the necessity for the submission of unit requisitions.

2. The general mobilization reserves of the Marine Corps consist of those principal items and those support items needed to expand the training base upon mobilization. The mobilization reserves consist either of supplies on hand or earmarked requisitions to DSA for DSA-managed items and specifically stated requirements for Navy-furnished materiel. In point of fact, the general mobilization reserves of the Marine Corps are a comparatively small and insignificant part of the Marine Corps war reserves.

(3) Responsibilities. Marine Corps Orders 04400.39B and P4400.80 set forth the responsibilities of the levels of command within the Marine Corps as they pertain to war reserves. These responsibilities are summarized as follows:

(a) Commandant of the Marine Corps—Has overall responsibility for support of all Marine units plus specific responsibility for providing overall policy, requirements, and guidance on Headquarters, Marine Corps-controlled war reserve materiel to the Inventory Control Point (ICP). Computes and procures principal items.

(b) Commanding Generals, Fleet Marine Forces—Provide to the ICP recommendations for the inclusion of new items in PWR; provide updating information for the factor deck program; establish readiness time frames for materiel to support their forces; and recommend release of war reserve materiel.

(c) Director, Marine Corps Reserve—Ensures computation of requirements and plans for withdrawal of 4th MEF PWR.

(d) CG, Marine Corps Supply Activity, Philadelphia (ICP)—Computes secondary items and stores as protected assets all Marine Corps-held war reserves not bought out of the stores system. Computes and maintains factor decks for computation of war reserve requirements.

(e) FMF Units—Compute, budget, buy, and maintain mount-out or mount-out augmentation stocks as required.

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(4) Maintenance of War Reserves. The responsibility for maintenance and rotation of war reserve assets in the Marine Corps falls upon the holder. Since almost all items that require maintenance are held in the remote storage activities (depots), there is little or no problem involved.

(5) Application of War Reserves. War reserve assets of the Marine Corps may not be used without release by the Commandant of the Marine Corps (CMC).

(6) Reporting of Assets. At present a dual capability exists within the Marine Corps computer programs to identify and print out the status of all war reserve stocks that have not been purchased from the stock fund. The basic stratification procedure, which is performed semiannually, provides a war reserve report on all items in the stores system. The computer is programmed so that an inquiry concerning an individual federal stock number (FSN) will result in the printout of the entire status including the war reserve position of that item. The Marine Corps is in the process of establishing a system that concerns itself with the visibility of the mount-out and mount-out augmentation assets at the using unit level, in lieu of a large, expensive, and cumbersome total reporting system to manage this portion of their war reserves on an exceptional basis. The CMC has directed his FMF commanders to prescribe minimum requirements for such stocks. Once those minimum requirements are established, the Marine Automated Readiness Evaluation System/Force Status Report, will report when mount-out or mount-out augmentation does not meet minimum established requirements.

(7) Summary. The Marine Corps war reserves are an integral part of the overall logistics system. They consist of the project stocks established for the forces assigned to the FMFs and general mobilization reserves available to expand the training base in the event of a mobilization. The project stocks are all in the pre-positioned war reserve category.

d. Air Force

(1) General. The Air Force uses the term war readiness materiel (WRM) to identify that materiel required in addition to peacetime assets to support forces, missions, and activities that have been approved in the USAF War and Mobilization Plan (WMP). Policies and responsibilities for the authorization, stockage objectives, location, distribution, accounting, preservation, and management of WRM are set forth in detail in Air Force Regulation 67-44, "Management of War Readiness Materiel (WRM)." These policies and responsibilities apply to all Air Force activities (including the Air Force Reserves and the Air National Guard) and implement DOD Instructions. A buy and budget guidance and policy letter is developed annually by HQ USAF from Office of the Secretary of Defense (OSD) and Office of the Secretary of the Air Force (OSAF) guidelines and distributed to all major levels of command for compliance. Those directives, coupled with the logistic requirements to support the Air Force concept of operations and plans, provide the framework for the Air Force WRM program. The objective of the Air Force WRM program is to authorize, acquire on time, pre-position and/or prestock, and maintain in a serviceable condition ready for use all WRM needed to support the activities in the USAF WMP. The materiel must be readily accessible to the using unit either by being located at the base of planned use or by being quickly available by the most rapid mode of transportation. To achieve this objective each activity responsible for WRM prestocking and/or pre-positioning must ensure that WRM will be pre-positioned for each coded line item and ensure that all WRM requirements are included in budget estimates and financial plans. The WRM will be programmed and acquired as stated in the annual HQ USAF buy/budget policy letter. Each activity is to assure that all WRM authorizations are maintained current by properly reflecting changes to the appropriate authorization document; to apply the necessary management, manpower, facilities, and funds to maintain WRM ready for use; and to minimize the need for WRM by relying as much as possible on materiel and facilities that support peacetime operations.

(2) Primary Examples of War Readiness Materiel Within the Air Force

(a) Air Transportable Housekeeping Set—A selected package of air transportable equipment and supplies used to support deploying units at bases not possessing adequate logistic support capability. Typical of this category is the Harvest Eagle package, which consists

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of four sets of equipment, each capable of supporting 1100 men under a bare-base concept with electricity, dining facilities, shower facilities, and billeting in overseas theaters and CONUS. It can be rapidly deployed to the area of need.

(b) Housekeeping Sets—Selected items of housekeeping and administrative equipment and supplies, exclusive of subsistence, pre-positioned at designated locations for support of planned wartime or contingency operations. Housekeeping sets either supplement materiel assets at existing operating bases or provided a source of assets at standby bases.

(c) Station Set—Selected items of mission support equipment pre-positioned at designated locations for support of planned wartime or contingency operations. Station sets will either supplement materiel assets located at existing operating bases or provide a source of assets at standby bases.

(d) War Consumables—Expendable items directly related, and necessary to a weapon and weapon support system or combat and combat support activity, for which the expenditure factors or quantities are indicated in the USAF WMP. Examples of the items are auxiliary fuel tanks, pylons, POL (excluding packaged petroleum products), chaff, aircraft guns and gun barrels, ammunition, bombs, rockets, air-to-ground and air-to-air missiles, in-flight food packets, dropsondes and related flight expendables, racks, adapters, launchers, and film.

(e) War Readiness Spares Kit—An air transportable package of spares and repair parts and related maintenance supplies (remove and replace maintenance concept) required to sustain planned wartime or contingency operations of a weapon system for a specified period of time pending resupply. War Readiness Spares Kits (WRSKs) will support aircraft, vehicles, and other equipment as appropriate. WRSKs are normally pre-positioned with the using unit.

(f) Base-Level Self-Sufficiency Spares—Spares and repair parts intended for use as base support for units that plan to operate in place during wartime, utilizing the remove-repair-and-replace maintenance concept.

(g) Special Packages of Equipment—Upon approval of HQ USAF, special WRM packages of equipment and supplies may be established and prestocked at strategic locations, both in CONUS and overseas, for use during a period of increased tension to facilitate contingency operations from bare bases and to provide a capability for the development of sustained bases from bare bases. The contents of a special package of equipment will be developed by the using command in coordination with Air Force Logistics Command (AFLC) and identified by specific item.

(3) Maintenance of WRM. All WRM is to be maintained in a serviceable condition at all times. The air base or storing activity WRM project officer will report to the proper maintenance activity all WRM items (including those in place or in storage) requiring periodic inspections and/or technical order compliance (TOC) to ensure the establishment of a maintenance schedule. The maintenance of WRM and the configuration management of items is a daily function. Maintenance must respond to the workload to ensure that WRM is always maintained serviceable and compatible with the equipment with which it will be used. Therefore, a high priority will be assigned the maintenance and upkeep of all WRM assets. All activities having WRM support responsibilities must establish positive procedures and working priorities to ensure compliance.

(4) Application of War Readiness Materiel

(a) WRM is to be used to support the implementation of approved USAF or Command War Plans, as appropriate.

(b) WRM equipment is to be used, as necessary, to ensure its serviceability and to minimize the need to replace similar peacetime items.

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(c) WRM may be used to support peacetime emergencies, such as relief in disaster; to support contingency operations; to relieve not operational ready-supply conditions; to conduct operational readiness tests; or to support other vital emergency operations not anticipated or specified in approved USAF War Plans. In such instances the using activity or storing command will take immediate priority action to replenish used items to preclude degradation of wartime capability.

(d) In the event of contingency, WRSKs will be reconstituted as soon as feasible upon cessation of hostilities. However, units engaged in a contingency and subject to planned redeployment in support of another contingency that may occur during the same period will maintain the integrity of the WRSKs to ensure the units' capability to redeploy. Any use or movement of WRM that degrades mission capability must be coordinated in advance with the using command.

(5) Reporting Procedures. With the exception of one portion of war consumable assets possessed by AFLC the status of all war readiness reserve packages are reported monthly through command channels to AFLC and HQ USAF. The status report contains a percentage status of the package and only identifies shortages in detail when the package contains major deficiencies or is not combat ready. The status report uses a rating system that is a function of both the percentage of completion of the package and the judgment of the reporting command. Therefore, a package with a high percentage of fill could still be nonoperational if key items are missing. The report on shortages includes the nomenclature, FSN, requisition number, and depot action.

(6) Summary

(a) The Air Force has a well designed and documented system for the identification of WRM assets and their status. At any level of command there is always a WRM or organizational element of commissioned and noncommissioned officers who are knowledgeable of the command posture to the extent necessary to support operational requirements.

(b) Active and Reserve forces of the Air Force are equipped and supported to the same degree, commonly referred to as the force-in-being concept. Because of this concept, war reserves are tailored to support clearly identifiable concepts of operations for specific units that are in being and operationally ready.

(c) Conceptually, there have been no changes in the Air Force WRM program since 1965; however, a change in status reporting was implemented in 1966 to include all packages of WRM. Before 1966, only war consumables were reported and the support packages were assumed to be in being. Current reporting gives each command level a comprehensive status of WRM within its area of responsibility.

e. Defense Supply Agency

(1) General. DSA is not directly comparable in concept, function, or organization to the military services. The agency's function is to render common-item supply support to the military services. It receives its basic direction from DOD Instructions and Logistics Guidance.

(2) War Reserve Categories. DSA is concerned with war reserves only in the area of general mobilization stocks of DSA-managed items.

(3) Responsibilities

(a) Obtain forecasts from the military services of mobilization materiel requirements and review for conformance to DOD criteria.

(b) Compute mobilization materiel requirements when and in the manner agreed upon between DSA and the supported Service.

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(c) Compute, budget, procure, and store general mobilization stocks.

(d) Provide planning information to the Services on supply capabilities.

(4) Maintenance of War Reserves. DSA is responsible for the maintenance and rotation of stocks held for general mobilization.

(5) Application of War Reserves. DSA issues war reserves to requesting Services in accordance with Military Standard Requisitioning and Issue Procedures (MILSTRIP) and the Uniform Materiel Movement and Issue Priority System (UMMIPS).

(6) Reporting of Assets. DSA reports to the Services semiannually, showing availability compared to the individual Service and total general mobilization reserve materiel objectives.

(7) Summary. DSA computes, evaluates, budgets, procures, stocks, and reports to the Services asset position on general mobilization stocks of common items of supply that it manages.

6. PROGRAM GUIDANCE ANALYSIS

a. General

(1) OSD has published DOD Instructions on management of mobilization reserves, but these are basically addressed to the mechanics of accounting as opposed to the concepts on which reserves are established. Accordingly, the document to which the Services have historically looked for guidance has been the Logistics Guidance, in whatever form it has been published. Logistics Guidance for war reserves has been reviewed for FY 63 through FY 71. The format has changed through the years, and the content has become more specific as to force levels of activity and specific application to SE Asia and other areas of the world. The FY 63 Guidance established the baseline objective for support of general purpose forces at a level of effort not related to any specific war plan or strategic situation. The intent was to achieve a platform of capability with sufficient flexibility to permit selection from a wide variety of alternate courses of action. Its purpose was to provide the necessary coordinated basis for planning procurement programs and preparing DOD budgets. Through the intervening years its purpose was never clearly stated, but in several instances it indicated that it was an authorization document. The FY 70 Guidance again clearly states that its purpose is to establish procurement objectives for the materiel support of the approved forces. As of October 1969 the Planning, Programming, and Budgeting System (PPBS) of DOD has been changed to reincorporate the recommendations of the Joint Chiefs of Staff and to ensure dialogue with the Secretary of Defense in force development.

(2) A major deficiency in the Logistics Guidance for war reserves has been the failure to clearly address those reserves that are necessitated by operation plans and are not a part of the normal equipage of the approved force structure. Thus, the Services, particularly the Army, have found themselves attempting to unilaterally determine and justify requirements for such reserves. The newly adopted system provides an outstanding opportunity to correct this deficiency.

(3) The application of Logistics Guidance to the war reserve programs of the Services is covered in subsequent paragraphs.

b. Army

(1) The Logistics Guidance is used to develop the annual fiscal year budget and the 5-year financial program. The Guidance applies to all items of equipment unless specifically excepted. The Army participates in the development of Logistics Guidance and offers proposals to OSD. The Logistics Guidance permits budgeting for the Army mobilization reserve, but does not ensure that funds will be approved. In the past, only token amounts have been approved. The

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problem has not been with the Logistics Guidance; the problem has been to establish credible requirements to the satisfaction of OSD and Congress so that the mobilization reserve requirement would be funded. One action that would materially assist in such justification would be to clearly distinguish between those reserves that are for continuing logistic support of approved forces and those reserves that are required by operations plans and are over and above what is provided by the approved force structure.

(2) The Army uses two documents to implement Logistics Guidance. The current instructions for principal items are contained in "Policy and Guidance for Preparation of Part 1 of the Army Materiel Plan," dated 15 May 1969. The current instructions for secondary items are contained in "Materiel Policy and Guidance, Secondary Items, FY 70," dated November 1968. Based on these documents, the Army NICPs compute the mobilization reserve requirements and submit the requirements to AMC. AMC, in conjunction with DCSLOG, reviews the NICP's budget request to ensure compliance with Logistics Guidance. After DA approval, the budget is submitted to DOD.

c. Navy. Logistics Guidance sets forth the fundamental policies that govern Navy planning, programming, and budgeting to acquire resources to support the approved forces at specified levels during peacetime and for acquiring logistic capabilities to support combat in wartime. The Guidance strongly influences the acquisition of Navy war reserve resources and Navy readiness capability to provide both short-range and sustaining combat logistic support to the operating forces. Navy war reserve policy objectives in support of the Guidance are to support the materiel policy and strategic concepts reflected in Joint Chiefs of Staff and DOD contingency planning and the operation plans of the commanders of unified commands and component commanders, who establish time-phased combat logistic support requirements. An analysis of the Guidance, Navy Planning and Programming documents, and procedures used to implement the Guidance showed that the Guidance is sufficient in detail to permit the Navy adequate latitude and flexibility for its interpretation and to compute war reserve requirements. Analysis also disclosed difficulties stemming from efforts to relate budget requests for the requirements computed in accordance with the levels authorized by the Guidance to specific operation plans of the commanders of unified commands and component commanders. This analysis was particularly difficult in the case of war reserve planning for inactive ships and craft and for ABFCs. As related in Volume II and other monographs, activation of such ships and craft and the use of ABFCs were keys to the fulfillment of unplanned Navy logistic responsibilities in Vietnam. Analysis of these areas and the Joint Chiefs of Staff contingency planning system confirmed the existence of this problem and its root. An analysis of the formal Navy Planning and Programming System to ascertain if procedural complexities contribute to the problem of relating war reserve requirements to operations plans resulted in the following determinations:

(1) The system is structured to provide for the development and introduction of Navy strategic concepts and war reserve procurement objectives into the Joint Chiefs of Staff/DOD and Navy Programming plan and for their translation into budget submission to report Logistics Guidance. Minor modifications should be made to the system to align Navy war reserve program planning with the changes in operations plan concepts and appraisals now being developed by the Joint Chiefs of Staff in the proposed Joint Operational Planning System (JOPS). This should serve to relate certain war reserve requirements computations to the direct support of specifically designated operations plans.

(2) The Navy disseminates policy and guidance for the annual updating of its war reserve readiness capability in the Navy Program Objectives document, approved by the Secretary of the Navy; the NSP, approved by the CNO; and supporting Logistic Support Plans and Logistic Capabilities Plans, prepared by certain Navy shore and fleet commands.

d. Marine Corps

(1) The Marine Corps is addressed separately in Logistics Guidance. The Guidance is generally adequate and, if it were budget-approved upon issuance, would provide adequate Marine Corps-peculiar support for planned and/or assigned tasks. The Marine Corps must rely on other services for port, lines of communication (LCC), and base development.

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(2) The G-4 of the Marine Corps interprets the Logistics Guidance and determines quantities and types of major items and certain special items, such as HAWK missile support, to be procured in furtherance thereof. After the determination of major item structure, the Supply Department of the Marine Corps makes the basic determinations of policy for secondary items and the ICP computes the requirements. These requirements for major and secondary items are then priced out and become the basis for the budget request submitted in furtherance of any given fiscal year's Logistics Guidance. Headquarters, Marine Corps, has published two basic directives that govern the computation, acquisition, and essential management of war reserves. They are Marine Corps Order P4400.80, "War Reserve Manual," and Marine Corps Order 4400.39B, "Cloud, Storm, Hail: Logistic Policy for."

e. Air Force

(1) In general the Logistics Guidance has been adequate to permit the Air Force to budget for and establish its WRM program. The Air Force views the Logistics Guidance authorization as an upper limit and not as an acquisition objective. An example is pipeline time. No WRM support for pipeline is authorized within the Air Force, except in SE Asia and Europe.

(2) Annually, upon receipt of the Logistics Guidance, the Air Force publishes a comprehensive letter that provides the WRM and related wartime logistic support guidance and policies for the development of the current-year buy and the following-year budget. This letter is distributed to all headquarters staff agencies and major command echelons. It charges each with the responsibilities for careful review of applicable policies, the proper dissemination to all concerned, and assurance of compliance. The instructions are very clear and treat all aspects of WRM, thus providing a positive policy framework for Air Force materiel managers. The Air Force has no support requirements for the other Services that require peculiar WRM. The execution of certain contingency plans calls for the Air Force to be supported by other Services, such as Army construction in Vietnam, but currently no system ensures that the materiel is available to provide such support.

f. Defense Supply Agency. DSA was mentioned in specific terms in the Logistics Guidance during the Vietnam era. The Logistics Guidance was used as basic guidance for such requirements as post-D-day safety levels and the mobilization planning period, e.g., D+6 months, D-to-P concept. The guidance is quite broad in nature and generally permits the agency to work out its own systems subject to agreement of supported Services on areas of interface. Notable in this guidance is the provision that directs issuance of war reserve assets in accordance with MILSTRIP and UMMIP systems with reference to the Joint Allocation Board of the Joint Chiefs of Staff only in the event of priority conflicts between requisitions. Also noteworthy is the fact that there is no requirement to protect any assets. DSA Headquarters annually requests general mobilization requirements from the Army and Marine Corps. The Air Force selects and computes mobilization requirements for subsistence and medical items. For other commodities the Air Force provides selection criteria and requirements computation formula. The Navy selects and computes mobilization requirements for subsistence, medical, clothing, and textile items. For other commodities the Navy also provides selection criteria and formulas to DSA. DSA disseminates this information under a letter of instruction to the Defense Supply Centers, which in turn compute or recompute the total agency requirements.

g. Summary. Logistics Guidance has generally recognized the need for establishing war reserves for the approved force structure; however, it has been deficient in the identification and support of war reserves for special theater requirements.

1. WAR RESERVE TERMINOLOGY

a. General. War reserve terminology is conflicting and confusing. Paramount to uniform interpretation and implementation of a war reserve program and a war reserve system is the use of uniform, commonly understood terms throughout DOD. Standard terms that have standard definitions need to be used for directives and regulations. JCS Publication 1 serves as the basis for standardized and uniform terminology throughout the DOD, but the characteristics of uniform terminology are not always achieved in JCS Publication 1. It contains at least 28 terms that are

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directed to some form of mobilization reserves in their definitions. The Services and DSA have each originated additional terms to satisfy their own procedural complexities. All of these add up to a considerable number of not so readily understood war reserve terms and a multitude of different terms being used throughout DOD.

b. Army. The Army has many terms that have been used over the years to describe items selected for war reserve. Some of the current terms are combat essential items, mission essential items, mobilization items, mobilization reserve stockage list items, maintenance essential items, functional items, insurance-type items, and mandatory stockage list items. All of these terms have a different meaning. To help solve the terminology problem, the Army Program to Improve Management of Army Reserves (PRIMAR) Project 6-2 recommended the adoption of a list of standard terms within the Army. This list establishes the terms and specifically defines them.

c. Navy. Many war reserve terms currently used by the Navy do not provide a basis for common use and precise understanding among logistic planners, materiel managers, fiscal personnel, and officials at command levels. The use of the terms in JCS Publication 1, which is supposed to serve as the basis for standardized and uniform terminology throughout DOD, does not satisfy the needs of the Navy. For example, the term "mobilization," which is frequently used as a prefix in titles and in the content of definitions, conveys misunderstandings that reflect on the validity and credibility of war reserve programs. In concept it denotes a formal declaration of war and a massive buildup of forces and resources without regard to the needs of the civilian economy.

d. Marine Corps. The Marine Corps directives dealing with war reserves suffer from the same misuse of terminology that affects the entire war reserve program. The current Marine Corps directives use confused or incorrect terms in identifying the various classes of war reserves. This is doubtlessly due to the fact that JCS Publication 1 and the various DOD directives and memorandums are equally confusing in the definition and use of terms.

e. Air Force. Terminology within the Air Force is standard but does not directly relate to any other Service or DOD terminology. War readiness materiel is the term used to identify and establish priorities for all war reserve assets in the Air Force. Since the Air Force uses the force-in-being concept, the term mobilization is seldom used or required.

f. Defense Supply Agency

(1) The terminology utilized by DSA, like that of the Services, is based on DOD directives, instructions, memorandums, and JCS Publication 1. Terminology is perhaps more confusing in DSA than in the Services because DSA must use the terms of all the Services as well as those of DOD. In this connection, the agency was directed to conduct a study of the management of mobilization reserves. One of the basic findings of that study was that the terminology connected with war reserves was so confused and misunderstood that it was extremely difficult to use among various Service agencies.

(2) The DSA "Report of Mobilization Reserve Materiel" of February 1967, prepared at the request of the Office of the Assistant Secretary of Defense, Installations and Logistics (OASD (I&L)), recommended that the Joint Chiefs of Staff direct the Joint Military Terminology Group and the Joint Chiefs of Staff, Materiel, to review the total range of terms in use within DOD as they apply to mobilization war reserves and to incorporate the resolutions in JCS Publication 1. It was further recommended that priority attention be given to the redefinition of the term "mobilization." The Joint Chiefs of Staff, OASD (I&L), Army, Navy, and Air Force each concurred in the review, with the Joint Chiefs of Staff stating: "The present terms are neither understood nor uniformly utilized by the Services, DSA and the Unified Specified Commands. It is interesting to note that a recent DINS (Directorate of Inspection Services) report of inspection of the Joint Staff makes a parallel comment." Actions have not yet been taken to implement the recommendations on terminology.

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g. Summary. The analysis showed a need to resolve the numerous war or mobilization reserve terms in use throughout DOD and to redefine and restrict the use of the term "mobilization." This term is a holdover from the World War II era and has long since lost its original meaning. The approved forces are now much larger than in the pre-World War II era, and it is generally acknowledged that the country must maintain sufficient forces-in-being in either Active or Reserve status to provide for national defense. Accordingly, the concept of establishing reserves of equipment and supplies for the purpose of outfitting vast numbers of conscripts is no longer valid. Further, the cost of providing adequate Reserves to support the Approved Forces has historically proved to be greater than the Congress has been willing to bear. When these costs are increased or confused by attempts to justify mobilization stocks for undetermined numbers of forces, they are virtually doomed at the budget table.

8. WAR RESERVE CATEGORIES. The preceding paragraphs indicate that concepts of war reserves must be completely restructured to conform to current and future supportable requirements. An analysis of the logistics planning of the Services and their ability to obtain war reserve funds showed that budget justification was easier for essential pre-positioned requirements than for increased levels of stock within the supply system. In addition, no empirical evidence is available to support the premise of many individuals within the Services that the lack of war reserve funding seriously affected the Service support capability during this period of study. Poorly organized and administered supply management systems would be the more probable and supportable cause. To eliminate this confusion, it is necessary to identify war reserves by their true functional categories, which are as follows:

a. Force Structure War Reserves—Those materiel reserves authorized by the Secretary of Defense for the support of, and based on the composition of, the Approved Forces shown in the Five Year Defense Program (FYDP). The planning processes of each of the Services and DSA clearly support the concept of the Force Structure War Reserves, as these are the items such as ammunition, POL, equipment, and spare parts necessary to support the troop, armor, ship, and aircraft activity of the Approved Forces.

b. Special Contingency War Reserves—Those materiel reserves that are authorized, procured, and maintained to support unique requirements identified by logistic appraisal of specific operations plans and that are not contained in or justified by the composition of the Approved Force structure. These war reserves constitute those special war reserve projects necessary to support special contingency requirements. They are not clearly defined in DOD Directives or in JCS Publication 1; however, they are provided for in general terms in the Logistics Guidance.

c. Economic Retention War Reserves—Those assets of on-hand war reserve materiel that are excess to levels approved for procurement by the Secretary of Defense and that can be economically held against some plausible future requirement. This category should not be a catch-all for excesses but should directly relate to or stem from war reserve assets, such as the on-hand "iron bomb" excesses of the Air Force on 1 January 1965.

d. Subcategorizations. It is believed that the above categories can be utilized to replace all of the many terms currently in use. The new terms would greatly enhance the coherency, stability, and acceptance of the overall war reserve program at every level. Further, to promote understanding and simplicity of management, the first tier of subcategorization within these categories should be limited to the following:

(1) Force Structure War Reserves

(a) Force Structure War Reserve Requirement—The quantity of an item, in addition to the peacetime force materiel requirement, necessary to support the Approved Forces in combat until resupply can be effected from production.

(b) Force Structure War Reserve Acquisition Objective—That portion of a Force Structure War Reserve Requirement that is intended to be obtained within a finite time period.

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(c) Force Structure War Reserves Acquisition Program for Force Structure War Reserves—An individual Service plan of action for the phased acquisition of Force Structure War Reserves included in the DOD FYDP.

(d) Force Structure War Reserve Asset—Any item of Force Structure War Reserve Materiel in the possession of a DOD element at a specific point in time.

(2) Special Contingency War Reserves

(a) Special Contingency War Reserve Requirement—The quantity of an item required to be on hand to execute a specific operation plan or set of plans that is not or will not be available from Force Structure or Forces Structure War Reserve Assets or Programs.

(b) Special Contingency War Reserve Acquisition Objective—That portion of the Special Contingency War Reserve Requirement intended to be obtained within a finite time period.

(c) Five Year Defense Program for Special Contingency War Reserves—An individual Service plan for phased acquisition of Special Contingency War Reserve Requirements included in the DOD FYDP.

(d) Special Contingency War Reserve Asset—Any item of Special Contingency War Reserve materiel in the possession of a DOD element at a given point in time.

(3) Economic Retention War Reserves

(a) Economic Retention War Reserve Asset—Any item of Economic Retention War Reserve materiel in the possession of an element of DOD.

9. WAR RESERVE PROGRAM OPERATIONS

a. Requirements and Item Selection

(1) General. DOD Directive 3005.5, "Criteria for Selection of Mobilization Reserve Items," is the basic directive on which the Services and DSA establish their selection criteria. Each of the Services publishes a separate directive repeating the DOD criteria and amplifying it to fit its individual system. The current DOD directive was published on 8 November 1965 to replace its 1960 predecessor. The basic change was to amplify the criteria rather than to change their quality. The criteria are straightforward, simply worded, and readily understandable. If it were implemented in the proper spirit and context, the directive would serve to reduce the range of war reserve items stocked to a more manageable level. Section XV, Chapter 2, JCS Publication 3, further amplifies war reserve selection criteria and expands on the application of pre-positioned war reserves. A comprehensive checklist on criteria for pre-positioning is included. Succinctly stated, the question that should be asked of every item considered for stockage as war reserve is: "Is this item so essential to combat that it absolutely must be readily available all the time, and is it so difficult to obtain that it most probably would not be readily available if it were not in stock?" The method and directives used by each Service to select these items are set forth in the following paragraphs.

(2) Army

(a) AR 11-8 implements DOD Directive 3005.5 and provides detailed selection criteria for the Mobilization Reserve Stockage List. Responsibilities are included for the TSG and the Commanding Generals of AMC, STRATCOM, Army Security Agency, and the Army NICPs. AMC Regulation 11-30 is the directive to the NICPs. Prior to 1966 the Army used a Combat Essential List on which to base War Reserve Requirements for repair parts, tools, and equipment. In 1966 the Army developed a Mobilization Reserve Stockage List (MORSL). This list was coordinated worldwide and provides the user with a consolidated list of principal items. The latest list is published in Supply Bulletin SB 700-40, September 1968. Utilizing the MORSL

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and AR 11-11, which sets forth the authorized levels, the NICPs compute the mobilization reserve requirements for principal and secondary items.

(b) PRIMAR Project 6-2, Enclosure 6, dated October 1968, discusses in detail the Army system of selecting items for war reserve and sets forth the following recommendations:

1. "That a composite directive with appropriate cross reference be initiated to pull together under a single proponency the direction and guidance for the mobilization reserve program.

2. "That each of the directives which repeat the DODD 3005.5 be evaluated by DA to assure unified application of implementation of item selection criteria.

3. "That responsibilities for the development of the MORSL be developed to include the requirement for establishing the 'foundation' of 'Force, Rules of Fill and Priority,' and that potential capabilities of PRIMAR Project 1-1 and Project 3-7 be considered for initial item identity to the MORSL.

4. "That the standards by which the MORSL will be reviewed and approved by the Department of the Army be published to the field, so that preparation can follow the same rationale.

5. "That the Department of the Army hold conferences with representatives of all commands, at least annually, to form the base for coordination of actions throughout the year.

6. "That confidence in the Basic List of Principal Items be built through detailed evaluations against the 'foundation' of force requirements, essentiality and priorities. The evaluation of mobilization reserve against projected purposes be a matter of review from the levels of the Department of the Army.

7. "That the MORSL publications of the future provide the line item number, but be complemented by Federal Stock Numbers (FSNs), make (model) identified to the major subcommand density compatibility.

8. "That the policy of 'Unit Exchange vs Repair' be explored to provide more definitive guidelines of content of Mobilization Reserve Stockages of assemblies and sub-assemblies.

9. "That detail evaluations be accomplished of the complexities facing commanders in maintaining the integrity and protection of the Mobilization Reserve Stockages."

(c) These recommendations have been approved and are being implemented by AMC. The current Army system provides for item selection on a Force Structure basis. However, the present system will not solve the problem of the Vietnam War, which required a war reserve of selected items such as port handling equipment, power generating equipment, materials handling equipment, portable piers, and marine craft. Theater war reserves must include these types of equipment if the Services are to be prepared for future wars.

(d) Item selection under operational projects is currently a responsibility of the overseas Army commander and is subject to DA approval. Assets applied to operational projects are reported quarterly by each overseas command to the AMC MIDA located in Chambersburg, Pennsylvania. In 1966 U.S. Army, Pacific, started a complete review of all operational projects. This review eliminated 23 projects no longer considered essential. The remaining 22 projects are under review and requisitions for shortages will not be forwarded to CONUS until Vietnam T-Day assets are considered. In 1968 U.S. Army, Europe, also started a review of operational projects. This review is under the direct supervision of the DCSLOG in Europe.

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(e) Operational projects range in support from direct Army operational support to theater support, such as POL pipelines and LOC and port equipment and facilities. The Army is currently required to unilaterally justify and fund operational projects regardless of applicability. The 4 December 1969 summary of operational projects indicates a worldwide requirement of \$638,672 million, with assets of \$130,343 and a shortage of \$508,329 million.

(f) Requirements determination for principal items for war reserves in the Army does not present a problem, since they are readily identified to a specific requirement. Therefore, they are easily justified and supportable. Secondary items do present a problem as the Army computes requirements on approximately 245,000 line items, many of which are not necessarily essential. As an example, the FY 70 war reserve stockage list prepared for the Eighth Army Depot, Korea, contained 17,500 line items that depot managers identified as non-essential to Eighth Army requirements. These were items such as salt and pepper shakers, 3-foot lengths of specific types of wire, and other insignificant items that should be readily available in peacetime operating stocks.

(3) Navy. OPNAV issues OPNAV Instructions to appropriate commands for each CNO Special Project or Element that provides policy, guidance, and directions for the selection of war reserves. These Instructions encompass the three areas of war reserves that follow.

(a) War Reserve Item Selection for CNO Special Projects (Less ABFCs)

1. The operational requirements for CNO Special Projects originate with the fleet commanders. After evaluating the fleet commander's requirements, CNO issues directives to NMC and Navy Bureaus. These directives provide policy, guidance, and directions for detailed technical planning, selection of equipments and materiel on a line-item basis, computation of requirements, and procurement within funds limitation or retention of long supply assets, and pre-positioning. Pre-positioning includes both physical distribution and protection in NAVSUP computers against unauthorized issue for other purposes.

2. In compliance with CNO policy and guidance for fleet readiness, the Naval Material Systems Commands and Bureaus select on a line-item basis those equipments and materiel that are under their cognizance and that, from a technical and performance standpoint, will fulfill the fleet commander's mission requirement for the Special Projects.

3. With the exception of the ABFCs portion of the projects, each Systems Command and Bureau computes quantitative requirements on the basis of CNO policy for providing 90-day combat support to Marine and Navy forces. NAVSUP selects and computes secondary items (e.g., repair parts and items centrally managed by DSA and Government Services Administration (GSA)) to support the principal items selected and computed quantitatively by the other Systems Commands.

4. In compliance with the CNO policy objective for fleet mobility and combat endurance for six months without resupply from the CONUS, NAVSUP selects and computes for 90-day combat support secondary item pre-positioned war reserve requirements that are carried onboard ships in the MLSF. The purpose is to augment the 90-day support in the initial allowances of combatant ships.

5. The Naval Material Systems Commands under the Fleet Material Support Element of CNO Special Project Hurricane/Typhoon select equipments and materiel and compute on a line item basis essential pre-positioned war reserve requirements to outfit and repair Category A and B Inactive Reserve ships that are needed to meet the wartime fleet augmentation requirements of the fleet commanders.

(b) Item Selection for Advanced Base Functional Components

1. In addition to lists of personnel, designs, and other planning factors, each ABFC includes detailed lists of materiel, equipment, vehicles, boats, and consumables (see paragraph 3(a)2.).

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2. In the NSP, promulgated by OPNAV, functional components are listed for bases planned for various types of wars. Guidance on military urgency and priority is assigned under the following classifications:

a. Class IA²—Essential materiel to fill minimum requirements for the support of military missions and tasks during cold-war emergencies and for improvement in the general war posture. Stockpiling within established limits and/or pre-positioning required.

b. Class IB²—Essential materiel requirements for the support of military operations during periods of limited war and for improvement in the general war posture. Stockpiling within established limits required for the establishment of "In-Place Mobilization Reserve Stock" to counter a substantial interruption in resupply from CONUS.

c. Class IC²—Essential materiel requirements for the support of initial military missions and tasks following the onset of general war. Stockpiling within established limits required for the establishment of "In-Place Mobilization Reserve Stock" to counter a substantial interruption in resupply from CONUS.

d. Class II²—Additional materiel requirements to supplement and replace initial-period stocks for the support of military operations under conditions of general war. Stockpiling required for long-lead-time items recommended for total requirements if level of funding permits.

e. Class III—The materiel requirements for the support of overall missions and tasks. Stockpiling not essential.

3. The items actually stocked depend on such considerations as the following:

a. Assets on hand, including various leftovers from previous wars

b. Program and budget decisions for new procurement that are made on the basis of factors such as the urgency or priority of advanced base requirements for the execution of particular operations plans and long lead times to acquire particular equipment and materiel.

4. Navy System Commands and Bureaus are assigned primary cognizance of an ABFC because the technical function falls within their responsibility, e.g., Naval Ships Systems Command for Ship Repair Components. Each command and bureau has the responsibility to:

a. Ensure on a continuing basis that the ABFC System is an effective logistic tool by deleting obsolete and superseded components, developing new components when needed, and determining that all components are up to date technically and adequately support their mission

b. Budget annually and initiate procurements

c. Inspect, test, preserve, pack for overseas shipment, and hold ABFC materiel in dehumidified storage for immediate release

d. When directed by CNO in a contingency, coordinate assembly and shipment of components to tidewater.

²Pre-positioning outside CONUS will be accomplished post-M-Day or upon specific authority of CNO prior to M-Day.

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5. A comprehensive review and appraisal of fleet commanders' advanced base requirements for contingency operations and the numbers and types of ABFCs required for operating plan support is currently in process under the direction of the Deputy Chief of Naval Operations for Logistics. The objectives are to update, modernize, and provide credibility for funding and increase the readiness of the ABFC System.

(c) Item Selection for Ammunition. War Reserve Requirements for items of ammunition are based on the Nonnuclear Ordnance Requirements, as discussed in the Ammunition Monograph.

(d) Item Selection for Other Acquisition War Reserve Requirements. NAVSUP utilizes technical guidance provided by the Naval Material Systems Commands plus their analyses of secondary item application and usage data from past activation experience to select and compute OAWRR for post-D-Day repair, modernization, activation, and outfitting of Selected Reserve ships and aircraft.

(e) Number of War Reserve Items. The Navy has approximately 300,000 items in the "Pre-Positioned War Reserve Requirements" category, although all are not stocked. There are approximately 180,000 in the OAWRR category. The latter includes D-to-P extensions of items in the first category and items for Reserve units similar to those for the Active ones. Thus, there is an overlap estimated at about 80 percent. This overlap results in an estimated total number of items on the requirements list of 336,000, including those retained but not budgeted for procurement.

(4) Marine Corps. The Marine Corps selection criteria are set forth in Marine Corps Order P4400.80.

(a) Principal items for war reserve are selected by the staff of CMC. The secondary items in "mount out" are selected by personnel in the field units. Secondary items held in the automatic resupply blocks are determined by the recommendations of maintenance technicians from the field units reviewing the list of items periodically and recommending additions or deletions to the list. These technicians also review the number or depth of the items to be held. The results of these reviews are then consolidated by the NICP at (MCSC), Philadelphia, into a factor deck, which is electronically multiplied against equipment density to determine total requirements.

(b) Principal and secondary items of war reserves within the Marine Corps are considered credible as they are related to specific requirements and an austere range. Requirements are computed on approximately 57,000 secondary items.

(5) Air Force

(a) All USAF WRM is pre-positioned and/or pre-stocked and identified to specific aircraft activity and support requirements.

(b) War consumable requirements (air munitions, POL, tanks, racks, pylons, in-flight rations, and miscellaneous aircraft, sortie-oriented supplies) are computed based on total aircraft sorties and consumption factors as published in the USAF WMP. Pre-positioning is determined by worldwide planned aircraft activity. Requirements and pre-positioning direction are published in the War Consumable Distribution Objective, which is updated quarterly.

(c) WRM spares kit items are selected based on two concepts of maintenance. The first, with the largest application, is the War Readiness Spares Kit (WRSK), which is based on a remove-and-replace maintenance concept; the second is Base Level Self-Sufficiency (BLSS), which is based on the remove-repair-and-replace maintenance concept. Item content of the spares kits is standard by aircraft and command but may vary between commands. Kit authorizations are the responsibility of AFLC but are the product of Air Force Systems Command (AFSC), using organizations, using command, and AFLC inputs. Spares kits normally contain a

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30-day supply of parts and are updated annually, although changes may be proposed at any time. Line items per kit range from 187 to nearly 4000.

(d) USAF Tables of Allowances (TAs) are established by AFLC in conjunction with the using commands to prescribe the range of items that may be identified as authorized requirements for the pre-positioning of Station Sets, Housekeeping Sets, Harvest Eagle Sets, AF Field Headquarters Sets, and special pools of equipment. From the contingency plans it is required to support and the availability of on-hand peacetime assets the storing base determines what range and quantity of items contained in the TAs must be authorized and pre-positioned. Line items per TA range from 35 to 791.

(e) In the computation of requirements for secondary items of supply, the Air Force is the only Service that does not include an additional quantity for on-the-shelf war reserves. The Air Force computes for pipeline only and relies on a hot production base for re-supply. Requirements are computed for approximately 30,000 secondary items.

(6) DSA. The Air Force and Navy both select DSA-managed items for a small number of commodities and furnish selection criteria for the remainder. The Army and Marine Corps provide DSA with lists of line item requirements that DSA recomputes to verify the validity. Line items of war reserves managed within DSA total approximately 250,000.

b. Summary

(1) Requirements determination for principal items within the Services do not appear to present significant problems, as they are normally identified to specific requirements. However, an examination of the range of secondary items on which the Services compute requirements indicates a variance in the application of the DOD selection criteria and/or philosophy of war reserve management. The approximate number of secondary line items on which computations are performed is as follows:

Army	245,000
Navy	336,000 ³
Marine Corps	57,000
Air Force	30,000
DSA	250,000

(2) Although the basic DOD criteria for item selection are the same for all Services, the ranges of items are not strictly comparable in view of differences in what is classified as war reserves and in the roles and missions. There are also differences in the application. However, it is apparent from the funding history of war reserves that the numbers of secondary line items stated as requirements have not been accepted as credible necessities.

10. PROGRAM EMPHASIS

a. General. The establishment of general programs and the budgeting and funding of war reserves are functions of the Service headquarters, but the adequacy and workability of those programs are determined in great measure by the interest and attention that they receive at all levels of command, including unified and specified commands and the Joint Chiefs of Staff. The following paragraphs summarize the efforts made by various levels of command to direct the war reserve program.

³Includes support for Marines, MSTS, Coast Guard, Maritime Administration.

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b. Office of the Secretary of Defense. The OSD has published a number of directives on Mobilization Reserves that establish broad guidelines. Perhaps the most significant of these from the standpoint of establishing program emphasis, or the lack of it, is DODI 4140.24, "Requirements, Priority and Application for Secondary Items." This is commonly referred to as the "stratification instruction." The salient feature of this instruction is that, although its purpose is to establish accounting procedures, war reserve assets are stratified after other assets and, therefore, receive only secondary emphasis. They are not given equal priority with day-to-day operations. This is somewhat of an anomaly, since the sole purpose of the Armed Forces is to be prepared to engage in combat as required to protect the nation. Nothing is more essential to the preparedness than adequate levels of reserve materiel.

c. Joint Chiefs of Staff and Commanders of Unified Commands. The logistics principles contained in JCS Publications 2 and 3 would tend to indicate a genuine interest in war reserves. As a practical matter, however, the Joint Chiefs of Staff have historically generally assumed that the individual Services would obtain and provide materiel as needed. The Joint Chiefs of Staff have recently made a considerable effort to obtain some degree of visibility over Service-held assets, but to date this effort has not been successful. Efforts are currently underway to resolve this problem. The new Joint Operational Planning System, to be effective, will require that the commanders of unified commands and the Joint Chiefs of Staff know enough about war reserves to permit logistic appraisal of the plans. Undoubtedly, knowledge will lead to concern, and concern to positive action.

d. Army

(1) The Army has recognized the problems in the war reserve system and has established a continuing program for improvement. As stated in Enclosure 8, PRIMAR 6-2, the Army has conducted several studies that resulted in recommendations relative to command emphasis. In 1967 the Brown Board made the following recommendation, which has been implemented:

"Recommendation 12. The Army issue and enforce a directive which re-emphasizes the importance of mobilization reserves. This directive should prescribe that:

- (1) "AMC direct all commodity commands to take action to comply with the intent of AR 11-11 which emphasized selection of components and assemblies rather than 'bits and pieces' for theater mobilization reserves.
- (2) "AMC closely police commodity command implementation of policies and procedures established for the designation and computation of theater mobilization reserve requirements."

Further, in 1968 the PRIMAR II Project 6-2 Study recommended that:

- "(a) DCSLOG employ continuous emphasis, review and management actions to assure the retention and integrity of mobilization reserve stockages.
- "(b) DCSLOG employ a continuous management review or task group action for the mobilization reserve program by implementation of a Program of Management Improvement to resolve shortfalls using those identified in this study as a point of departure."

(2) As a result of these studies and other recent DA activities, many far-reaching changes are being made either in the process of implementation or under contemplation regarding the Army war reserve systems. As these changes occur, they should provide a number of tools for appropriate level Army commanders to better assess and manage their portions of the war reserve program.

e. Navy. The NSP approved by CNO establishes policy, peacetime and wartime logistic support objectives, directions, and priority guidance for the Navy war reserve program. In the main, the program receives proper emphasis. When a particular part of a program requirement does not receive a full measure of emphasis in terms of funds, it is usually because the support

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of military strategy and the combat objectives of the commanders of unified commands and component commanders' operation plans require funds at that time for weapon system acquisition or improvement. Also, since war reserve requirements are subject to change, complete funding is sometimes deferred pending review and updating of requirements. In this regard, several projects are currently underway in the Navy to review and update equipments and materiel in some of the CNO Special Projects, including the ABFC portion. As these projects are completed, balanced funding should result for any such deferred requirement.

f. Marine Corps. The interest in war reserves encountered at various levels in the Marine Corps is evident. The fact that every level of command down to the battalion has specific and direct responsibility for and contact with mount-out and/or mount-out augmentation stocks goes a long way toward ensuring motivation for command interest.

g. Air Force. Air Force policy for emphasis for all echelons of command down to squadron level is clearly stated in positive terms in AFR 67-44 "Management of War Readiness Materiel (WRM)." It provides absolute guidance for the acquisition, budgeting, location and storage, maintenance, and use of WRM. AFR 67-44 specifically states in bold print: "**THERE WILL BE NO IMPLEMENTATION THAT WILL IN ANY WAY DEVIATE FROM OR CHANGE THE CRITERIA AND POLICIES IN THIS REGULATION.**" To reinforce this stated policy, the WRM reporting and management system is structured outside the normal supply system.

h. Summary

(1) Program emphasis is actively spoken to in each of the Services, unified commands, and the Joint Chiefs of Staff; however, the level at which war reserves are stratified by DOD Instructions, supporting documentation systems, and budgeting allocation clearly indicates a difference in actual emphasis.

(2) The Air Force and the Marine Corps program emphasis is easily recognized and well established.

(3) The Army and the Navy program emphasis is not as clear-cut as the Air Force and the Marine Corps, primarily because of more diversified concepts of operations and because a large amount of Army and Navy war reserves is kept in the supply system as opposed to being pre-positioned for specific use.

(4) None of the war reserve programs is specifically addressed at the Joint Chiefs of Staff or unified command levels. Each program is historically assumed to be properly operated by the Services in their logistic responsibilities.

11. WAR RESERVE ASSET VISIBILITY AND REPORTING

a. Unified Command Channels

(1) The commanders of unified commands need to be advised of the status of war reserve assets so appraisals can be made to determine whether their operation plans are logically supportable within required time frames. The concern of these commands is well expressed in the following excerpt from a CINCPAC Logistics Point Paper, "Status of PWRS:"

(a) "Statement of Problem: To determine adequacy of procedures for developing requirements and monitoring status of Prepositioned War Reserve Stocks (PWRS).

(b) "Facts Bearing on the Problem"

1. "The unified commander is responsible for the development of operational plans in his area to maintain the security of his command and protect the United States, its possessions, and bases against attack or hostile incursion. He does this through Contingency Plans.

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2. "The Service Component Commanders develop supporting plans to ensure fulfillment of missions assigned them by the unified commander. The basic logistic objective in support of these plans is to assure that the approved forces will be provided continuous sufficient logistic support in combat under the operational environment.

(c) "Discussion:

1. "Implicit in the unified commander's mission of planning is assurance that resources exist to support the plan. Under the present system the unified commander has only an estimate of the PWRS situation. This is caused by several factors:

"a. Contingency plans are dynamic and the supporting force structure is continually being altered. In addition, the equipment authorization for the various forces is constantly changing. Consequently, the time required for Departments to update PWRS requirements is significant and the exact status is difficult to determine.

"b. While policy differs from Service to Service, the Service component commander usually has only an overall view of the total PWRS situation, and just has immediate visibility over those stocks which he is physically charged with maintaining, e.g., CINCPACFLT War Reserve input for the PACOM Digest is provided by CNO. Requests for clarification on this input must be relayed through CINCPACFLT to CNO. The only data provided CINCPAC by the Services is the war reserve input for the PACOM Digest. This information is in gross terms with no indication of the effect of shortages in case of the requirement to implement a specific contingency plan.

2. "Responsibility for PWRS programs is fragmented both within headquarters and between headquarters. The fundamental question becomes one of determining procedures which will provide the unified commander with information as to whether his contingency plans can or cannot be supported. This is a joint matter since a deficiency in one service component, if recognized, might be made up by the application of additional resources from another service component."

(2) CINCPAC in this Point Paper recommended "that the JLRB review PWRS procedures in order to determine how the Unified Commander can be kept informed of the impact of PWRS deficiencies on contingency plans."

b. Army

"Current Systems
The Task Group conducted a comprehensive review of the reporting systems prescribed for the collection of materiel asset data and the techniques utilized in processing this data for management purposes. The following major systems, designed for Army-wide use, provide data which culminates at the national level in a display of the Army asset posture:

"The Equipment Status Reporting System (AR 711-5) which prescribes the system for reporting quantities and authorized allowances of selected items of equipment at organization, unit or activity levels. Status reports are required from active Army and Army Reserve units reflecting asset balances recorded in property books and stock record accounts.

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"The Overseas Depot Stock Status Report (AR 711-80) which provides a procedure for reporting on-hand balances in depot stock of designated items of equipment, assemblies and repair parts.

"Army Supply Status of Selected Assets under CONUS Inventory Control Point Accountability (AMC Regulation 711-11) which provides for the submission of asset data related to selected items of equipment.,

"The Army Equipment Record System (TM 38-750) which prescribes procedures for reporting equipment gains, losses and transfers by each organizational property book and stock record account.

"Operational Project reporting under AR 725-65 which provides for quarterly reports on requirements and on-hand assets by the proponent of the project.

"Deficiencies and Problems

"The multiplicity of reporting systems, together with the broad spectrum of items upon which reports are required, impact adversely on the responsiveness of the reporting mechanism and the reliability of data. The following conditions are in need of correction in order that maximum benefit may be derived from presently established procedures:

"A capability does not now exist to provide the necessary guidance and direction to insure uniform, precise and reliable operating systems for the collection and processing of reported asset data.

"Asset data generated under current reporting systems is not timely. Reporting frequency varies as to commands and items reported upon. Delays in submission and processing of data results in the display of assets at the national level for management purposes as long as 137 days from established report cut-off dates.

"The accuracy and preciseness of asset reports is questionable and data requires adjustment prior to its incorporation into the management process. This is in part attributable to the uncertainty of receipt of data from all units required to report, as well as the lack of uniformity in edit and validation prior to entry of data into the reporting system.

"Incompatibility of reporting requirements exists. As an example, many PEEMA principal items are components of sets and assemblies and are required to be reported under AR 725-8. The AR 711-5 reporting system is dependent upon property book entries that are based on TOE/MTOE authorizations. Unless PEEMA items are separately identified in The Army Authorization Document System (TAADS) documents, reporting of these items will not be accomplished by property book accounts.

"Present reporting procedures do not provide an adequate means for accounting and reporting of equipment in transit within the supply system. The unreliability of the data generated through The Army Equipment Records System (TAERS) causes item managers at NICPs to rely on non-factual information in estimating the intransit equipment population, which ultimately result in an adjustment to reported asset data.

"A single, clearly defined procedure has not been provided for reporting and accounting for losses of equipment which represent a reduction in the Army inventory. In the management of assets, it is of paramount importance that accurate determination is made of such losses to provide a basis for replacement. Reporting is now accomplished through use of a report format provided by TAERS. This procedure involves intricate use of code assignments to designate types of loss and adherence to certain property accounting procedures which impact on the timeliness and credibility of reported loss data."

(2) TIMAR was the work of a Task Group convened by the DCSLOG, DA. The group essentially reviewed the findings of the series of PRIMAR studies and the recommendations of Stanford Research Institute. Their recommendations were limited to those items and procedures that could be implemented within 6 months. The recommendations of this group have been

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approved with the exception of the portions dealing with reporting of in-transit assets. Action is underway to implement those recommendations.

(3) It should be noted that TIMAR does not address the reporting of war reserves as a separate program.

c. Navy

(1) Currently, each Navy activity subordinate to CNM that has responsibilities for war reserves planning, procurement and positioning of PWRS maintains visibility of requirements, assets on hand, deficiencies, and related operational readiness status information for the PWRS under its cognizance. These commands each provide inputs to two Navy PWRS Material Status Reports, which are submitted semiannually to CNO and the fleet commanders by NAVSUP and the Naval Facilities Engineering Command (NAVFAC).

(2) The ABFC PWRS status report submitted by NAVFAC in a new format in January 1970 provides the necessary information with which to evaluate materiel readiness and on which to base annual budget requirements. It shows for each ABFC, by dominant and contributing command, the present storage location of any PWRS materiel, dollar value, materiel shortages, and materiel readiness, i.e., operable, reduced, or inoperable.

(3) To improve the data base for preparation of the PWRS status report for the CNO Special Project materiel and items other than for the ABFCs, NAVSUP has implemented an Automatic Data Processing (ADP) reporting system designated as Pre-Positioned War Reserve Interrogation and Readiness Reporting System (PIRR), which requires reporting of PWRS status from all Navy stock points that maintain PWPS of Navy-managed materiel. This reporting is done within established systems for the submission of transaction item reporting to the ICPs. It excludes PWRS aboard mobile support ships. With the exception of the Aviation Supply Office, which is not yet under the Navy Uniform Inventory Control Point ADP Data System Procedures, the PIRR system has been scheduled for completion this year.

(4) The improved PWRS material status reporting capabilities described herein provide Navy Systems Commands with the capability to respond to future requests for PWRS status and operational readiness information from CNO and fleet commanders.

d. Marine Corps

(1) The portion of the Marine Corps war reserve that is retained in the Marine Corps stores system is simply protected stock and, as such, is carried on the computer. This stock is visible at the ICP and this information is rapidly available to Headquarters, Marine Corps.

(2) The remaining portions of war reserves are either bought out of the stores system mount-out and mount-out augmentation stocks or are provided by the Navy or DSA. For these items there is little or no visibility in the Marine Corps.

(3) There is no provision in the applicable Marine Corps Orders to provide higher commands with specific information on the status of mount-out and mount-out augmentation stocks. Further, there is no provision to establish a minimum mount-out and mount-out augmentation listing by unit type from a central level around which an economical and effective reporting system could be based.

(4) At present the Navy will provide information on status of assets at the request of the Marine Corps. The rest of the Marine Corps, including FMF commanders, must assume that assets are available. The lack of worldwide knowledge in both Marine Corps and Navy channels concerning the purpose of the ABFC program and the status of assets to be provided under it is indicative of this deficit. It is apparent that there is a need for identification of assets and shortages of Navy furnished items down to and including the Marine division level.

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(5) In perspective then, the weakest link in the Marine Corps war reserve program is asset visibility. Simply stated, they know, or can rapidly learn, what is in their stores system. Beyond that, however, the asset visibility is poor or nonexistent. It is inevitable that this deficiency must affect such areas as requirements computation and asset management.

e. Air Force

(1) As of 1 January 1965 the Air Force had only limited reporting of WRM. War consumables were reported monthly via the RCS: 1-HAF-S11 report; however, it soon became apparent that commanders and materiel managers needed to know the status of WRSKs and Station Sets as well to evaluate the total capability of WRM packages to support operational requirements. In 1966, the RCS: 5-HAF-S11, "WRM Capability (M-Rating)," was implemented for all WRM packages. This report is solely dedicated to reporting WRM and flows through command and control and materiel channels from the operating base to Headquarters, USAF, and AFLC on a monthly basis.

(2) Each package is given a materiel rating (M-1 thru M-4), which is a combination of percentage of completion of the package and the command's judgment as to the capability of the package to support the mission. Ratings are as follows:

M-1. Combat Ready—No Limiting Factors

M-2. Combat Ready—Minor Deficiencies

M-3. Could Be Committed—Major Deficiencies

M-4. Not Combat Ready.

The percentage required to attain each rating level varies by type of package, i.e., WRSKs, Station Sets, and War Consumables.

(3) If the package is in materiel status M-1, only the percentage is reported. If the package is reported as lower than materiel status M-1, the percentage is reported and the deficiencies are identified by federal stock number, noun, requisition number, and depot status on fill. Commanders make comments in plain language as to any special conditions.

(4) The primary purpose of the report is to keep commanders and materiel managers informed on a regular basis as to the status of WRM packages required to support operations.

f. DSA

(1) Item visibility of all stocks in DSA is maintained at the Defense Supply Center (ICP) level by random-access computer system and is readily available. When such information is needed at the headquarters level, it must be requested from the appropriate supply center and can usually be provided in a very short period of time.

(2) The visibility to the Services of assets to be held by DSA is another problem. The regulations governing this agency allow it to apply any assets against a Priority 1-8 requisition. Accordingly, although DSA may advise a given Service on one day that it holds a certain amount of stock against the Service's requirements, requisitions from another Service may deplete that stock the same day. Although DSA nominally complies with the provisions of subparagraph VII.Q.2.e of DODI 5105.22, the information on asset status provided to the individual Service is essentially worthless, since the assets identified are not protected for that Service.

g. Summary

(1) The Services, with the exception of the Air Force, do not presently have complete visibility of the assets in their respective war reserves. Each Service has programs

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underway to increase that visibility. However, the programs are oriented more toward supply and fiscal management than toward operational readiness appraisal.

(2) The systems that are in being and those currently under development in the Services, except the Air Force, are basically designed to provide visibility at the national level. These systems are not designed to provide timely, updated visibility to the planning levels within the unified command channels.

(3) Lacking a system that will provide visibility of essential war reserve assets, there is no way that the commanders of unified commands and their component commanders can plan effectively for prompt reaction to contingencies in their respective areas. A report oriented toward supply and finance is probably satisfactory for the level in days of supply for Service-peculiar personnel and weapons support; however, such a report is not adequate in the evaluation of the capability to execute special requirements of operations plans.

12. CONCLUSIONS AND RECOMMENDATIONS

a. Conclusions

(1) Logistics Guidance provided the necessary information and latitude for establishing war reserves for the Force Structure. However, in the area of determining Special Contingency War Reserves, there is a serious guidance deficiency (paragraph 6).

(2) The lack of common terminology militates against understanding, selection, computation, management, and reporting of war reserves (paragraphs 7 and 8).

(3) Planning does not clearly distinguish between Force Structure (Component Support) and Special Contingency (Theater Support) War Reserves (paragraphs 5, 6, and 7).

(4) Special Contingency War Reserve requirements to support specific plans are not always identified and supported through unified command channels (paragraph 10).

(5) The approximate number of secondary line items that the Services and the Defense Supply Agency computed for war reserves in FY 70 were as follows:

Army	245,000
Navy	336,000
Marine Corps	57,000
Air Force	30,000
DSA	250,000

The excessive range of items creates almost insurmountable management problems, costs vast amounts of clerical and management labor, and causes a lack of credibility at budget review levels. It is mandatory that the items selected for war reserve acquisition (as against economic retention) be only those hard-core items that are the minimum essential to sustain combat (paragraph 9).

(6) The low number of secondary items on which the Air Force computes its war reserve requirements is the direct result of its supply management philosophy and the Air Force force-in-being concept. War reserve secondary items are pre-positioned in tailored packages to support both the concepts of operation and maintenance. No level of war reserve items for shelf stockage is provided for in the requirements computation for secondary items (paragraph 9).

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(7) Each Service should maintain status information on war reserves to facilitate logistic appraisal and evaluation of funding requirements. Each Service has an ongoing program to obtain visibility over war reserve assets (paragraph 11).

b. Recommendations. The Board recommends that:

(LP-5) The Joint Chiefs of Staff provide common terminology so that for all purposes the identification and management of all war reserves, except Industrial Mobilization Facilities, be accomplished within the following three major categories:

(a) Force Structure War Reserves—Those materiel reserves authorized by the Secretary of Defense for the support of, and based on the composition of, the approved forces shown in the Five Year Defense Program.

(b) Special Contingency War Reserves—Those materiel reserves that are authorized, procured, and maintained to support unique requirements identified by logistic appraisal of specific operation plans and that are not contained in or justified by the composition of the approved force structure.

(c) Economic Retention War Reserves—Those on-hand assets of war reserve materiel that are excess to levels approved for procurement by the Secretary of Defense and that can be economically held against some plausible future requirement (conclusions (2) and (3)).

(LP-6) The first tier subcategories of the Force Structure and Special Contingency War Reserves consist of requirements, acquisition objectives, and acquisition programming and assets; the Economic Retention War Reserve category will consist only of assets (conclusions (1), (2), (3), and (4)).

(LP-7) The Joint Chiefs of Staff publish the above terms and definitions in JCS Publication 1 and that the following terms and their definitions be considered for redefinition, consolidation, or deletion in accordance with recommendation (LP-5):

- (a) Contingency Retention Stock
- (b) General Mobilization Reserve Materiel Objective
- (c) General Mobilization Reserve Stocks
- (d) Joint Mobilization Reserves
- (e) Mobilization
- (f) Mobilization Base
- (g) Mobilization Materiel Requirement
- (h) Mobilization Materiel Requirement Adjustment
- (i) Mobilization Reserve Materiel Objective
- (j) Mobilization Materiel Procurement Objectives
- (k) Mobilization Reserve Materiel Requirement
- (l) Mobilization Reserves
- (m) M-Day Force Materiel Requirement
- (n) M-Day Materiel Assets

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- (o) M-Day Materiel Requirements
- (p) M-Day Materiel Status
- (q) Mobilization Materiel Procurement Capability
- (r) Mobilization Reserve Stock(s)
- (s) Peacetime Force Materiel Assets
- (t) Peacetime Force Materiel Procurement Objective
- (u) Peacetime Force Materiel Requirement
- (v) Pre-positioned War Reserve Requirement
- (w) Pre-positioned War Reserve Stock
- (x) Total Materiel Objective
- (y) Total Materiel Procurement Objective
- (z) Total Materiel Requirement
- (aa) Mobilization Reserve Stock
- (ab) Total Materiel Assets (conclusion (2)).

(LP-8) The Office of the Secretary of Defense rewrite Department of Defense Instruction 4140.2, dated 28 July 1954, and that all related Department of Defense and Service directives be rewritten to incorporate the terminology, definitions, and management concepts and categories contained herein (conclusion (2)).

(LP-9) All future planning and budgeting directives issued within the Department of Defense recognize and adhere to the clear-cut distinction between Force Structure War Reserves, Special Contingency War Reserves, and Economic Retention War Reserves (conclusions (1) and (4)).

(LP-10) Each Service limit requirements for secondary items of Force Structure War Reserves to a minimum range of items necessary to sustain combat until additional resources can be made available from production. Initially, each Service should establish an arbitrary ceiling list of minimum requirements so as to give credibility for funding support to the essential hard-core items (conclusions (1) and (4)).

(LP-11) The Services' ongoing programs to obtain visibility over War Reserve Assets be actively pursued to the extent necessary to establish a pyramidal reporting system with focal points at each concerned echelon to maintain cognizance of the War Reserve Program (conclusion (7)).

CHAPTER VII

INDUSTRIAL MOBILIZATION PRODUCTION PLANNING

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INDUSTRIAL MOBILIZATION PRODUCTION PLANNING

1. BACKGROUND

a. The end purpose of defense production is to provide the supplies necessary to defend this nation in time of armed conflict. To accomplish this goal, the Department of Defense (DOD) must ensure sufficient peacetime stocks of materiel to fulfill the requirements generated during a contingency. Because of the problems of cost and obsolescence, however, these peacetime stocks must be held to a minimum. This can best be accomplished by ensuring that the industrial base (private and Government-owned industrial facilities) is prepared to accelerate its production output as rapidly as possible to meet wartime requirements. The Industrial Mobilization Production Planning (IMPP) Program is the vehicle used to accomplish this end. Such planning has as its objective the adequate and responsive utilization in wartime of this nation's production capability.

b. With accurate identification of a mobilization requirement, the planner can analyze production capacity, establish prewar agreements with commercial sources, and maintain Government-owned facilities for DOD-peculiar demands. If plans are realistic and adequately supported, DOD will have at the outset of any military contingency various options and alternatives that culminate in improved production lead times. Other benefits include lower war reserve stocks and a wealth of knowledge concerning industry and potential sources of supply.

c. From past mobilizations much has been learned about transforming the nation's industry from peacetime activity to the production of wartime needs in support of a major declared war. The precedents gleaned from past mobilizations, however, have proved to be very deceptive guides in planning for the mobilization of the industrial base during an undeclared limited war.

d. The IMPP, as it existed in 1965, had limited value in supporting Vietnam requirements. Plans were not prepared for a war without formal declaration. Plans assumed the availability of commercial plants in the event of hostilities. It was, rather, a business-as-usual economy, with competitive procurements the rule. With a booming economy, commercial producers became very reluctant to voluntarily give up their competitive position in commercial production, and the military programs had to compete for materials and components because of the military departments' unfamiliarity in utilizing the National Priorities and Defense Materials System.

e. Planning suffered during the years following the Korean War. The greatest deterioration occurred in the early 1960's, when the "short war" concept involving massive nuclear retaliation prevailed in DOD. The military departments were not able to retain production capacity or effectively plan for emergency production. Industrial mobilization production requirements were reduced, and funds to preserve the industrial mobilization base were cut. All the Services saw a steady decline in the whole industrial mobilization program until the beginning of the Vietnam War, when the need arose to reactivate the industrial base.

f. At this point the unsatisfactory status of the IMPP Program was recognized by the Office of the Secretary of Defense (OSD), when it was stated: "The experience of the past few months in expanding our production base had disclosed certain problems that might have been avoided, or more easily resolved, had our Industrial Mobilization Planning been more realistic."¹

¹Office of The Secretary of Defense, Memorandum, subject: Industrial Mobilization Planning, 4 March 1966.

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g. Following this realization, DOD in 1967 revised its policy guidance. The new approach directed IMPP on a uniform, coordinated basis under active management of the OSD. The basic policy directive was issued as DOD Directive 4005.1, followed by the DOD 4005 series of instructions. The new program reflects a determined OSD effort to:

- (1) Develop the essential parts of a realistic program on a coordinated and mandatory basis among the Services.
- (2) Make the program an effective instrument in measuring Termination Day (T-Day) requirements for maintaining a proper production base during peacetime.
- (3) Measure and weigh the alternative of mobilization stock objectives versus reserve production capacity and determine the relative costs involved to achieve the optimum balance between them.

2. MOBILIZATION REQUIREMENTS

a. General

(1) The establishment and preservation of an adequate industrial base is dependent on realistic industrial mobilization production requirements. Without valid, stable requirements it is virtually impossible to plan with industry or maintain the production base in an acceptable state of readiness.

(2) Immediately after Korea the capacity of the industrial base, as well as the planning for production, was satisfactory, particularly in the area of ordnance. However, after 1956 mobilization planning requirements became too low to justify the retention of a ready industrial base of the magnitude developed during the Korean War. Many of the plants and much of the equipment (80 percent in the Department of the Navy) that had been carefully laid away after Korea were thus eliminated. All of this was a result of the inaccurate mobilization requirements and the concomitant policy of getting rid of idle facilities. For example, at the outset of the Vietnam era, the approved Navy and Air Force mobilization requirements for MK 80-Series bombs (for which production planning was the responsibility of the Navy) amounted to only one-tenth of the requirement that was to be experienced during subsequent periods of maximum expenditure rates.²

(3) The essence of successful IMPP is the anticipated requirement for each item the planning must support. Stable, realistic requirements are the key. Low, unrealistic requirements, as found during the years preceding Vietnam, lead to reduced resources, disposal of facilities, lower incentive to plan, and industrial unpreparedness.

b. Number of Items Selected for Planning

(1) IMPP begins with receipt of a monthly consumption rate for a particular item (e.g., 500 each 750-lb. bombs per month). Most items so identified with a consumption rate are in the current procurement program. If they have critical subassemblies or components, they too will be selected for planning. Equipment not being procured may also be added; but current procurement directly influences the greatest number of planned items, since these are considered to be more important.

²Department of the Navy, Memorandum, subject: Industrial Mobilization Production Planning Program, 7 January 1970, pp. 1, 13 (CONFIDENTIAL).

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(2) Table 3 depicts (without regard to the intensity of planning required) the approximate number of Army,³ Navy,⁴ Air Force,⁵ and DSA⁶ items that qualify for planning. Not all the items are likely to be planned for, but it does give a picture of the size of the program. Note the decrease in the number of Defense Supply Agency (DSA) items selected for planning in 1969. DSA realized that limitations in planning personnel would not permit full compliance with all required actions for all items qualifying for IMPP. Consequently, DSA established a group of minimum essential functions to be accomplished, which resulted in the reflected decrease. This would permit concentration on fewer items and yield more current, complete, and reliable information. Planning for too large or too many requirements wastes resources needed for other activities and often results in an over allocation of capacity and possibly an over expansion of industry to meet the anticipated needs.

TABLE 3
NUMBER OF ITEMS QUALIFIED FOR PLANNING

<u>Service/Agency</u>	<u>1965</u>	<u>1969</u>	<u>CAT A</u>	<u>CAT B</u>
Army	2,400	50,308	3,550	37,000
Navy	836	50,400	9,584 ¹	--
Air Force	0 ²	18,000	1,266	82
Defense Supply Agency	17,000	10,000	1,220	3,724

¹As an example of the program's size and operation, the 9,584 Navy items classified as Category A are end items or critical components. These are items that will require detailed planning and individual agreements with producers. The balance of Navy items are Category B or less and may or may not require detailed planning, depending on the item.

²The Air Force had no industrial mobilization planning program between the years 1958 and 1967.

c. Computation of Mobilization Requirements

(1) Prior to the SE Asia situation, requirements for industrial mobilization planning were, in many cases, unrealistically low. This was particularly true in weaponry and ammunition. When actual requirements were later identified for Vietnam, a loss of production lead time resulted and funds were required to reestablish a neglected, discarded base for many items (e.g., M117 general-purpose bombs and 155mm M107 high-explosive metal parts). Furthermore, the impact of low mobilization requirements on the production base could again, as it did prior to the Vietnam era, adversely affect our readiness posture.

(2) An influential factor in the identification and development of mobilization requirements is the annual Logistics Guidance. The impact of this guidance on computations is felt when such elements as Approved Force structures and intensity rates for a current fiscal year are used as the basis for planning (and preparing) an industrial base for a distant, unforeseen conflict such as Vietnam.

³Assistant Secretary of the Army (I&L), Memorandum to Secretary of Defense, subject: Industrial Mobilization Production Planning Program—Limited War, 8 October 1969, pp. 3, 7.

⁴Peter P. Morgus, Status Report—Industrial Mobilization Planning Manual, Exhibit J to Report of Technical Meeting, American Ordnance Association, 23 September 1969.

⁵Defense Supply Agency, Memorandum, subject: Industrial Mobilization Production Planning Program, 2 January 1970, p. 4.

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(3) The real worth of IMPP is having the production capability for contingencies in both the distant and near future. If a probability exists of supporting an ally or U.S. forces from 1 to 10 years hence in larger numbers than the current Force Structure allows, then planning efforts should be established and stabilized at the higher level for planning purposes. A currently approved Force Structure of X divisions, Y ships, and Z aircraft should not prevent planners from planning on larger force levels (e.g., requirements) if assumptions are valid. Planners could then make more stabilized agreements with industry that would be more realistic and would not fluctuate from year to year. Plans for utilization of the industrial base should be based on plans and not constrained or affected by budgetary limitations (which in turn affect force levels).

(4) The incompatibility between DOD Instruction 4005.2 on Planning Requirements and the Logistics Guidance further complicates the computation of industrial mobilization production requirements. The Logistics Guidance affects intensity rates for forces, whereas the instruction envisions "full combat use of the Approved General Forces... which would continue without abatement for an unlimited time." To date, this basic incompatibility for mobilization requirements' determination still exists.

(5) In sum, the computation of industrial mobilization requirements using the Logistics Guidance is unrealistic and ineffective. Low mobilization requirements are the result. The low mobilization requirements combined with the poor forecasting for the SE Asia conflict made it difficult for the military departments to accomplish effective IMPP prior to the Vietnam conflict, played havoc with the industrial base, and resulted in premature loss of facilities needed to produce actual requirements. For example, the Decatur, Illinois, plant for production of MK 84 bombs was disposed of as being excess because of inaccurate mobilization requirements just prior to the need for SE Asia production. It took 18 months to re-establish this production capability.

(6) In fairness to those concerned, the record should reflect that both the Army and the Navy were aware of the status of mobilization requirements and the condition of the production base in 1965 (the Air Force did not participate in the IMPP program until 1968). Both the Army and the Navy made repeated efforts to include funds for upgrading the production base in the annual budget, but both found their efforts negated by priorities within the Services and by the economic and political factors associated with the size of the military budget.⁶

3. PLANNING WITH INDUSTRY

a. Source Selection Procedure. Following receipt of a mobilization production requirement, the industrial planner must select sources that have the capability or the potential to produce sufficient quantities of materiel to meet and continue to meet the estimated or planned future rate of consumption for a given item. Consideration is given to the total privately owned and Government-owned industrial production capacity of the United States, as well as the capacity located in Canada. The following example (illustrated in Figure 12), describes the functions and responsibilities of the industrial mobilization production planner in the source selection procedure. Assume that the planned commitment of U.S. forces establishes a projected level-off consumption rate of 500 rifles per month, beginning at D+6 months (D is Deployment Day). The industrial planner seeks commercial sources that are capable of meeting that rate as early as possible. Assume further that two companies, A and B, can reach a production rate of 200 and 300 rifles, respectively, at D+12 months. P-Day, the day that production meets requirements, then becomes D+12. The planner must make every effort to reduce this time frame even more (e.g., D+10). Such a reduction may be accomplished, for example, through industrial preparedness measures or by furnishing Government-owned equipment. Finally, each of the contractors becomes a planned producer and enters into a written but nonbinding agreement (DD Form 1519), which is basically an understanding of what he is expected to produce in wartime, for whom, and in what quantity. In general terms the procedure can be explained with the D-to-P chart shown in Figure 12.

⁶U.S. Army Munitions Command, Staff Study on Munitions Readiness (U), 12 April 1965 (SECRET).

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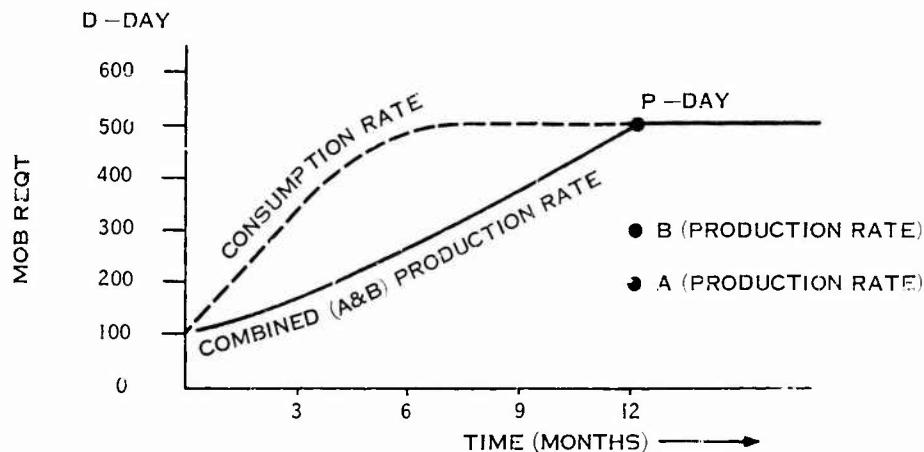


FIGURE 12. D-TO-P CHART

Note: D-Day = The day on which an operation commences or is due to commence.

P-Day = That point in time at which the rate of production of a military item meets and will continue to meet the estimated consumption rate.

b. Responsiveness of Industry to Vietnam Requirements

(1) Effect of National Policy

(a) Mobilization agreements signed with industry prior to the Vietnam era were made with the understanding that only a declaration of emergency would cause implementation. Instead the national policy in 1965 remained with peacetime procurement procedures the rule. This policy in effect invalidated mobilization agreements and placed the war effort on equal footing with commercial work. Responsiveness to Vietnam requirements therefore suffered; unfamiliarity with the National Priorities and Defense Materials System and the saturation of industry with commercial work preordained the result.

(b) The national policy had another denigrating effect; it lessened private industry's motivation to voluntarily shorten production lead times. If there was no urgency to implement industrial mobilization production agreements, then military requirements must not be urgent. Why should industry, in a booming economy, manufacture military goods at a lesser profit and risk losing loyal customers to competitors? This unwillingness became most apparent in the clothing industry.⁷ An Army study in 1966 stated: "It is doubtful that industry will ever openly admit its reticence with respect to Government orders; however, the lack of response to our bids is a matter of grave concern."⁸

(2) Reluctance to Bid

(a) The unpopular nature of the Vietnam conflict also made it difficult to interest private industry in accepting a contract that did not suit the industry's purpose. Contractors did not feel obliged to perform "a requested patriotic duty which could influence significantly the success of our Armed Forces in a Limited War."⁹ Instead they were reluctant to bid for Government work. This was true even for planned producers. But in most cases "the companies

⁷ Defense Supply Agency, op. cit., p. 1.

⁸ U.S. Army Tank Automotive Command, Evaluation of Industry's Capability to Support ATAC's Procurement, 13 May 1966, p. 3.

⁹ Department of Defense Instruction 4005.3M, subject: Industrial Mobilization Production Planning Systems and Procedures, 24 December 1968, p. x.

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strongly affirmed their desire and intent to be planned producers and activate their assigned ASOD (Assistant Secretary of Defense) packages under a 'Mobilization' but not under a 'guns and butter' situation.¹⁰

(b) When queried why they were not bidding on certain contracts, planned producers made such comments as:

1. Commercial work is at full capacity; no floor space.
2. Quantities are too small to interrupt commercial business.
3. Procurement quantities are too small to warrant the expense of moving equipment to the plant.
4. Corporation is at full capacity producing other military equipment.¹¹

(c) Although these statements were often the reaction to normal peacetime procedures, it should be noted that, had the Services been more familiar with the National Priorities and Defense Materials System, more responsiveness could have been achieved. The Department of Defense cannot force a contractor to bid, but it can require him to produce by placing rated orders through the Business and Defense Services Administration. As was often found, the mere threat of using the priority system resulted in responsiveness (albeit belated) from private industry. (A more-detailed discussion and the related procedures are contained in the Procurement and Production Monograph, Chapter II.)

(3) Deterioration of the Planned Base

(a) Responsiveness (and reduction of lead times) was further inhibited by DOD emphasis on maximum competitive procurements. The war had to be fought at the lowest possible cost; if negotiated procurement must be utilized, it too should be on a competitive basis.¹² The result was solicitation of all potential contractors for supply of an item; the planned producer was usually one of those solicited. As indicated in the preceding paragraphs, many planned producers failed to submit proposals when bids were solicited for their planned items. When a planned producer was awarded the contract, it was often found that his capability had deteriorated or become nonexistent because of prolonged inactivity.¹³

(b) When corporations became successful bidders on items for which mobilization agreements existed with other companies, another interesting situation developed. The Government often had the expensive task of relocating equipment from the original planned producer to the successful bidder in order to give the latter the capability to produce the item. Since a contractor's bid is frequently contingent upon the Government furnishing certain pieces of equipment, such actions usually resulted in added costs and time to transfer equipment. Often a contractor would take an alternative approach and acquire equipment at his own expense by using a rated order obtained from a defense procurement contracting officer on a DD Form 619. (A more detailed discussion and related procedures are contained in the Procurement and Production Monograph, Chapter II.) But the easy approach was to bid on an item with the provision that certain tools and equipment must be made available by the Government. When this was done, it usually resulted in diversion of the planned producers and in effect made the new producer the planned producer (but not necessarily for the same item). Had another conflict requiring U.S. industrial support developed, it would have been extremely difficult to activate the base for increased military requirements because of the base's cannibalization.

¹⁰ U.S. Army Munitions Command, Ammunition Production Base Study, 12 September 1969, Section VII, p. 1.

¹¹ CG USAMU COM MSG 1266-67, 19 June 1967 to CG, USAMC, subject: ASD Review of Army Packages--Annual Recertification.

¹² U.S. Army Munitions Command, Procurement and Production Policy and Procedure 1965-1969, 12 September 1969.

¹³ Department of the Army (DCSLG), Letter, subject: Mobilization Planning for Counterinsurgency Operations (U), 24 July 1968 (SFCRET).

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(c) This destruction of the planned base will be discussed later in this chapter, but its impact on responsiveness will be illustrated here with one example. The Department of the Navy maintained two reserve cartridge case production lines for 5-inch ammunition at Riverbank. The Army, in order to build up its own production quickly, cannibalized, with the Navy's permission, these two lines to the extent of about \$1.8 million. This equipment later was replaced but caused a 15-month delay in activation of the Navy's lines.¹⁴

(4) Condition of Equipment. Another factor affecting responsiveness was the condition and age of equipment in layaway. The Department of Defense had executed pressure over the years to dispose of facilities. Thus, few standby lines or package plants were available in 1965 to meet SE Asia requirements.¹⁵ During the SE Asia expansion, much expensive, long-lead-time production equipment had to be procured and installed before production could be expanded. Some requirements for facilities had been foreseen and funds requested, but the gross underestimation of requirements and the heavy pressure to dispose of facilities were the principal causes of unpreparedness. Further discussion of Government facilities is found in paragraph 4.

(5) Industrial Preparedness Measures

(a) When planning efforts uncover a soft spot or potential production problem in the industrial base, industrial preparedness measures (IPMs) are a means for identifying equipment or processes to correct the deficiency. When implemented, IPMs shorten mobilization production lead time or increase mobilization production capacity. The IPMs, usually in the form of a study or project, often result in cost savings. If, for example, a study revealed that production bottlenecks at companies A and B (Figure 12) could be overcome by adding one more lathe (Government-furnished, if necessary) to their facilities, the total production rate could probably be increased significantly. For example, if the addition of one lathe doubles each company's production rate so that the combined rate becomes 500 rifles per month at D+6, then obviously large savings will accrue from lower reserves. Equally important is the increase in the capability to respond earlier at a higher rate. Other typical examples would be facilities projects and the establishment and maintenance of production lines in idle standby.

(b) Records and discussions reveal that IPMs receive a very low funding priority and, consequently, very low emphasis in the Services. Those measures that are approved are usually geared to a current procurement action, i.e., improving the capability of a contractor to produce on a current contract. Seldom was a preparedness measure approved strictly for mobilization purposes, regardless of whether equipment might be available from the Defense Industrial Production Equipment Agency or a military department.

(c) An attempt was made to identify actual expenditures for IPMs through financial records. Only the Department of the Navy was able to give an indication of trends that reflected the following picture of allocation versus request for funds for FY 64 and FY 69:

	IPM Funds (\$ mil)			
	FY 64		FY 69	
	Requested	Allotted	Requested	Allotted
Navy (NAVORD & NAVAIR)	3.19	1.90	4.91	2.13

The Navy estimates that it conducted 250 IPMs in the 1950's versus 20 during the 1960's. The lack of funding support, combined with the relatively low priority afforded the total IPM program at operating activities, had a definite impact on responsiveness of the industrial base.

¹⁴Department of the Navy, op. cit., p. 14.
¹⁵Ibid., p. 13.

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c. Industrial Capacity

(1) Objectives. One of the objectives of industrial mobilization planning is to predict potential supply shortages at the outset of a limited war and to identify areas in the base where expanded and/or modernized production capabilities are needed. This objective can be realized if valid requirements are known and cooperation is received from industry in identifying the amount of privately owned capacity available.

(2) Inadequate National Capacity

(a) Several industries have capacities that are inadequate to serve the nation. In the miniature and instrument ball-bearing industry only three principal producers are left in the continental United States.¹⁶ Of these, one just became sales agent for a Japanese manufacturer, one is operating at a loss, and one is vacating the market through diversification. Continuing this trend, U.S. aircraft and missiles will soon become dependent on factories that are located on foreign soil and are not necessarily dependable in the event of hostilities. Other critical industries are those that manufacture pinions and gears and nitroguanidine, which is a critical ingredient of TNT.

(b) The shipbuilding industry is also inadequate. No significant modernization of shipyards has been accomplished since World War II, with the exception of Sun Shipbuilding and Litton Industry's facility at Pascagoula, Mississippi. If general mobilization were indicated, with general mobilization requirements, the ability to support or fulfill such requirements would be very poor. Some of the principal support problems envisioned by the Department of the Navy are:

1. Inability to obtain sufficient skilled manpower
2. Unavailability of shipyard and boat building capacity to the Navy when other DOD requirements are totaled and integrated with those of the Navy
3. Shortage of drydocking.¹⁷

(3) Effective Utilization of Existing Capacity

(a) Closely related to the inadequate national capacity in certain industries is effective utilization of existing industrial capacity. All too often during the Vietnam era military procuring activities were unsuccessful in soliciting competent producers because private industry was saturated with commercial orders. In the casting and forging industry, for example, a "sellers market" existed. Plants operated at a high percentage of their capacity; they did not need to compete for business and were even able to select from the multitude of proffered orders only those most efficiently suited to their equipment and techniques.¹⁸ This situation resulted in many orders being handled somewhat routinely, and lead times increased accordingly.

(b) There were many other instances where industry was operating at near, if not full, capacity in support of the commercial market. Examples were clothing, tires, landing gear, sandbags, herbicide defoliant, food service disinfectant, transmissions, engines, and axles.¹⁹ If open capacity remained, industry was willing to allocate this to defense orders; but the open capacity was hardly sufficient to support the heavy demands, and the result was increased lead times and higher prices. Adding to the problem of effective utilization of capacity was the competition that arose among military departments for available capacity.

¹⁶ New Hampshire Ball Bearing Company, Fact Sheet, Depletion of Vital Defense Resource--The U.S. in Jeopardy, 8 September 1969.

¹⁷ Department of the Navy, op. cit., p. 23.

¹⁸ U.S. Army Materiel Command, Castings and forgings for Defense, 6 December 1966, p. 4.

¹⁹ Defense Supply Agency, op. cit., p. 1; U.S. Army Tank Automotive Command, op. cit., p. 21.

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'c) A specific example of industrial saturation with commercial work was Rockwell Standard Corporation, the Army's only source for 2-1/2-ton axle sets. This company had agreed to be the planned producer for 4400 axle sets per month in the event of mobilization. When an actual requirement developed for 2500 sets per month in 1965, the most Rockwell would agree to produce was 1800 sets per month, their maximum capacity from a fully automated line. In order to increase production, Rockwell would have to pool more of its own equipment at its own expense, which the company planned to do in the event of mobilization. After study, the Army decided to expand Rockwell's facilities with Government-owned equipment at an expense to the Government of \$1,704,059.²⁰ This expansion was the most effective way to attain an acceptable production rate in an expanding market.

(4) Use of National Priorities and Defense Materials System

(a) Although industry was saturated with commercial orders, much of that capacity could have been turned to defense production through effective use of the National Priorities and Defense Materials System. This system requires prime contractors of defense agencies, their subcontractors, and their suppliers to employ on their purchase orders the priority powers authorized by the Defense Production Act of 1953, as amended.

(b) Properly identified defense orders must be given delivery preference over nondefense business by the suppliers who receive them. These procedures have been in effect all through the years between the Korean War and the Vietnam War—but without emphasis. Consequently, at the outset of the Vietnam War there was a lack of understanding of the system both in Government and industry.

(5) Current Policy

(a) In the event of a future limited war that does not call for the full Approved Force level, DOD policy is to acquire requisite materiel with minimum impact on commercial production.²¹ It is anticipated that few, if any, economic controls will be applied nationwide, such as the limitation and conservation orders, wage and price controls, and rationing that were employed during World War II. The Defense Production Act, in combination with information received through IMPP, will be relied on for materiel requisition.

(b) If a limited war occurs, many of the problems related to industrial capacity may still appear. Should actual requirements that greatly exceed mobilization production requirements develop, production sources may be difficult to locate. If, as in the case of Rockwell, the capacity is fully consumed on defense orders, the Defense Production Act is not much help. Industry must be willing to divulge its true capacity, knowing that some day it may be forced to accept a defense order if these problems are to be alleviated.

(6) Capability to Support Another Contingency. Considering the saturation of this nation's industrial capacity with military and civilian orders, this country's capability to support a second contingency was a point of serious concern. In reviewing this aspect, the Board asked each Service to assess the capability of the industrial base (Defense Industry) to support another similar contingency with certain items during and including peak SE Asia experience. On many of the items the military departments declared that an additional contingency would be impossible to support without an emergency declaration. Even with a declaration of emergency, it would have been difficult to supply many of the items in a responsive manner. Additional facilities would have to be furnished and new production sources identified. This was the result of having redistributed much of the Government-owned equipment in the planned base in order to support competitive procurements.

²⁰ U.S. Army Tank-Automotive Center, Telecon with Mr. Dan Roman, Mr. S. Sobieski, and Mr. Seler, 9 and 12 January 1970.

²¹ Department of Defense, op. cit., pp. 4, 23.

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d. Current Planning Program with Industry

(1) DD Form 1519

(a) Privately owned industrial capacity that is or may be made available in wartime is the first consideration of a planner. The intention is to rely on this capacity to the maximum extent possible. This privately owned capacity is committed on a Prime Contract Schedule (DD Form 1519), which amounts to a gentlemen's agreement only. This contract has no legal basis, since the whole program is purely voluntary. It basically reflects an agreement between the Government and an industrial concern in which the company expresses its willingness and ability to produce the items in the quantities specified and the Government expresses its intention to procure the items should the need arise.

(b) DD Form 1519 is vital to the planner's efforts. It is the principal vehicle used by DOD to relate wartime military materiel requirements to available production capacity. In the event of declared mobilization, agreements would be implemented as required. Therefore, information from industry must be valid and current, particularly if the military departments are to adequately augment private capacity with Government-owned facilities.

(2) Industry's Reaction

(a) To assess the validity of information contained on the prime contract schedules (particularly since the program is voluntary), the military departments and industry were asked to state their appraisal. Perhaps the most descriptive, representative statement received was from the Machinery and Allied Products Institute:

"To be involved in this activity (Industrial Mobilization and Production Planning) is an exercise, only. The plans are far out of date. In our case, we can produce the yearly planned production volume in a few days. Plans do not include considerably expanded product line or utilization of a twenty-fold increase in production base. The desire for standard military products rather than commercial eliminates the immediate use of commercial manufacturing facilities. To retool takes 8 to 24 months and usually destroys the capability to produce and support commercial products needed in times of total mobilization. Industrial Mobilization Planning needs major attention. Military product programs must match this planning. Our nation's strength relates to our industrial capacity. Strategic planning must relate to this strength.

"Emergency Planning Schedules of the DD-1519 series have involved hundreds if not thousands of nonproductive man-hours. Of all the ones we have handled the very first option of any thereunder remains to be exercised. This is our experience over the last 15 years. We well appreciate the intent of industrial readiness aspect of these programs and we subscribe to any program that preserves that fiber. However, the practical aspects are this, judging by past experience anyway. Any previous M day has been preceded by so many months of heavy "unofficial" mobilization that most contractor's facilities would be filled with new orders and they would be unable to honor the terms of any earlier Industrial Readiness Schedule with our renegotiation of delivery capabilities. As you know, there are no contractual obligations by either party under these schedules."²²

(b) Industry is also looking for the potential for profit.²³ None exists in the IMPP program unless mobilization is ordered. Industrial representatives have frequently raised questions regarding the extent of participation of industry without more adequate incentives to warrant their continued participation.²⁴ As the Institute said, hundreds of nonproductive man-hours have been expended without return over the last 15 years.

²² Machinery and Allied Products Institute, Letter, 2 January 1970.

²³ Defense Supply Agency, op. cit., p. 4.

²⁴ W. L. Powell, General Electric Corporation, Industry Views New DOD "Planned Producer Program," Address to the American Ordnance Association Industry in Chattanooga, Tennessee, 23 September 1969.

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(c) The following Service comment summarizes the preceding thought:

"With the requirements for more detailed and in-depth analysis, some contractors are becoming reluctant to continue to supply the necessary information. This reluctance develops from the increased costs accruing to the contractors without any return or anticipated return on their investment."²⁵

(3) Service Reaction

(a) The Services recognize the same strengths and weaknesses in the program that industry does. Generally it is felt some guarantee of return to industry for its planning efforts is needed to make the program more effective. Whether it is an undated but signed contract or a simple procedure for invoking emergency procurement in case of undeclared war, some indication is required, particularly if IMPP is to be effective for limited wars.

(b) An example of the problems encountered is the following statement from the Department of the Navy:

"The voluntary Planned Producer Program as it now exists leaves much to be desired. Thirteen (13) DD Forms 1519 were selected at random, for examination as to consistency among successive years. The study covered FY 66, 67, and 68 and showed widely different capabilities to produce the planned items with no apparent change in plant status. For example in 1966 and 67 one company indicated that he would reach his maximum rate of 200 units per month at M+18. In 1968 he indicated he could reach the same maximum rate by M+8 with no explanation by the ASPPO (Armed Services Procurement Planning Officer) or the IPR (Industrial Plant Representative) for this marked improvement. Another company predicted a maximum rate of 25,000 units per month in 1966 and 67 but only 12,000 in 1968 with no explanation for the sharp drop in capacity. While perfectly valid reasons may exist for the changes in capacity shown in these examples, it would have taken further analysis and follow-up actions to learn these reasons. The conclusion to be drawn is that contract schedules, in general, are not completely useful or reliable as received from the ASPPO up to this time."²⁶

(4) Armed Services Procurement Planning Officer Support

(a) The application of the planning program to individual facilities normally will be accomplished by an Armed Services Procurement Planning Officer (ASPPO). He is the DOD coordinator of mobilization production planning for those plants assigned to him and is responsible through command channels of the Defense Contract Administration Services (DCAS) to the Assistant Secretary of Defense (Installations and Logistics) (I&L) for conducting this important part of the IMPP Program.

(b) Effectiveness of the program depends to a large degree on a thorough job by the ASPPO. There is strong indication, however, that DCAS is not sufficiently staffed to provide the personnel required to make contacts with industry, much less the in-depth, time-consuming analyses required of the current program. As of 1 November 1969 there was a backlog of 2,500 schedules "and most DCASRs, to date, have not been able to initiate extensive subcontract planning."²⁷

(c) The impression conveyed to the Services was best summarized as follows:

"In special capability studies, the information received from a contractor or ASPPO very often differs from that contained in the DD Forms 1519. The overall

²⁵ Sacramento Air Materiel Area, Letter to the Joint Logistics Review Board, 26 September 1969.

²⁶ Department of the Navy, op. cit., pp. 9, 10.

²⁷ Defense Supply Agency, op. cit., p. 7.

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indication is that very little effort is being made at the ASPPO and contractor level in response to the voluntary planned producer program.²⁸

4. GOVERNMENT FACILITIES

a. General

(1) Historically, the U.S. Military Establishment has found it necessary to own some of the facilities necessary to fulfill its production requirements. Prior to World War II, almost all such facilities were owned by the Government and there was little or no defense industry as we know it today. Because of the magnitude of World War II, however, this posture changed dramatically. The demand for the goods to fight a global war resulted in a massive expansion of Government-owned facilities. The Government found it could not effectively manage such an extensive manufacturing complex by itself and, therefore, turned to industry.

(2) This vast expansion was seriously hindered by both the reluctance and the inability of the private sector to finance the necessary facilities. The problem was solved in a number of ways. For example, the Services financed from appropriated funds the construction of plants and the purchase of machinery for use by the firms servicing them. During World War II the Army spent approximately \$5 billion and the Navy \$3 billion for this purpose.

(3) A new and significant pattern of business emerged, one in which the Government frequently provided the facilities and equipment to execute its defense contracts. In this pattern private and Government ownership became (and is today) very mixed and diverse. As a result, bargaining over what proportions of new facilities would be Government-furnished has become a major facet of contract negotiations.

(4) Since the major areas of the private sector, e.g., planned producers, have been discussed earlier in this chapter, only the Government segment of the production base and the planning will be reviewed here to assess its policies, condition, utilization, and responsiveness during the Vietnam era.

b. Scope and Policies

(1) The Department of Defense now has custody of over \$15 billion worth of Government-owned industrial property and plant equipment. The \$15 billion is a composite figure and represents four categories of property owned by the Government. The first category is real property, consisting of both land and buildings that amount to \$2.4 billion. The second category is Government-owned material, valued at \$4.7 billion, that will be incorporated in the end item or consumed in the manufacturing process. The third category represents an estimated \$3 billion worth of special tools and test equipment that are procured on the supply contract as items required for and peculiar to the production of a particular weapon or system. The fourth category is plant equipment consisting of industrial plant equipment (i.e., machine tools, generators, etc.) costing more than \$1,000 and centrally managed through the Defense Industrial Plant Equipment Center (DIPEC) at \$2.6 billion; and other plant equipment consisting of furniture, pallets, trucks, fire extinguishers, and other equipment with a unit cost of less than \$1,000 at \$1.9 billion.²⁹

(2) In recent years DOD has followed a policy that stipulates that facilities necessary to the performance of the contract should be provided by the contractor.³⁰ Current DOD directives require that Government ownership of industrial facilities be minimized insofar as possible in consonance with the need to ensure economical support of essential defense production,

²⁸ Department of the Navy, *op. cit.*, p. 10.

²⁹ Major General A. J. Stanwix-Hay, Deputy Assistant Secretary of Defense (Material), Address to the National Machine Tool Builders Association, in Dallas, Texas, 19 November 1969.

³⁰ Harry B. Yoshpe and Charles F. Franke, *Production for Defense* (Washington, D.C.: Industrial College of the Armed Forces), p. 50.

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maintenance, and research and development programs.³¹ Emphasis placed by DOD on this policy is attested to by the following comments to industry:

" . . . I would encourage you to examine your plant capacity in terms of both civilian demand and demand for long term military programs. To the extent additional capacity may be needed to meet requirements of this type, it should be financed with private capital."³²

" . . . the application of our basic policy is going to be extremely firm with respect to new facilities, and we are going to seek every possible means of divesting ourselves of existing facilities for which government ownership is not required."³³

(3) The Department of Defense has considered, and tried without appreciable success, many incentives to get private business more deeply involved in this approach. The difficult balance between furnishing attractive incentives to the contractor and avoiding over-compensation for the risks encountered has usually resulted in proposals that industry does not consider sufficiently attractive to warrant increased investment. The Government inventory of plant equipment, for example, has increased 37 percent between FY 62 and FY 67, from \$7.6 billion to \$10.4 billion, respectively.³⁴ This increase is primarily because it is difficult to persuade the contractor to buy equipment. The contractor contends that the uncertainty and instability of defense programs introduces an unacceptable degree of risk and that his capital budget precludes such investments.

(4) Government-owned facilities have historically been criticized on the basis that the work could be done more efficiently and at less cost by private industry. Yet for valid economic reasons the necessarily profit-motivated private sector is not in the least interested in the sporadic production of specialized military products. Private business cannot afford to maintain idle capacity over sustained periods for defense products that have minimal peacetime military requirements or little civilian market application. Not the least of industry's concern is its public image. For example, the manufacture of certain types of munitions (chemical and biological) is not only extremely hazardous to the producer but use of these munitions is considered by many to be immoral; a fact that has become a significant political issue during the Vietnam War.

(5) Some critics insist on the complete disposal of Government-owned facilities. Their contention is that the production capability is just as available to the DOD mobilization base under private ownership as under the Government. This is true only to the extent that the facilities are owned by the companies that will subsequently support DOD when an emergency arises. In addition, since in most cases equipment owned by DOD must be sold on a competitive basis, there can be no assurance that it will be sold to a planned mobilization producer.

(6) The DOD policy to sell Government-owned facilities and to discourage further acquisition of them has met with only partial success. It is quite significant that

" . . . to a degree, this limited success has actually benefited the mobilization readiness of DOD by providing a large reservoir of facilities to meet emergency needs. The activation of reserve facilities to support Vietnam production immensely simplified the establishment of added production capability for helicopters, ammunition, and bombs. If DOD had successfully withdrawn from facilities ownership, it is not likely that this acceleration could have been accomplished so expeditiously."³⁵

³¹DOD Directive 4275.5, 1966.

³²Honorable Paul R. Ignatius, Assistant Secretary of Defense (I&L), Address to the American Forging Association, in Chicago, Illinois, 16 November 1966.

³³Honorable Robert H. Charles, Assistant Secretary of the Air Force (I&L), Address to the Forging Industry Association, White Sulphur Springs, West Virginia, 26 May 1967.

³⁴Office of the Assistant Secretary of Defense (I&L), Industrial Base Projections as of 31 December 1966, Table 630.

³⁵Yoshpe and Franke, op. cit., p. 55.

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e. Condition of the Base

(1) "To the extent that these (Government-owned) reserve facilities are adequately maintained and identified in support of specific mobilization production programs, they drastically reduce the difficulties inherent in rapid expansion of the production base."³⁶ At the outset of the Vietnam War not only were mobilization plans inadequate and improperly designed for the type of contingency encountered in Vietnam, but the condition of Government facilities was very poor owing to the lack of funds and program emphasis. Recently, a high ranking OSD official stated:

"Much of the Government-owned production base today is in deplorable condition. It was bought and built new in the late 30's and early 40's. It waltzed thru WW II. It has been dusted off and refurbished for Korea; laid away and dusted off again for Vietnam; and is now thoroughly and disgustingly worn out."³⁷

(2) In 1965 six commodity or end-product categories accounted for over 90 percent of the total inventory of active and inactive industrial facilities of DOD. The largest single category of such facilities included those involved in the production and loading of ammunition and solid propellants. Almost without exception these plants were a legacy of the massive buildup during World War II. At that time our available manufacturing capacity "... was dangerously inadequate for the national defense and woefully deficient for an offensive war of global extent."³⁸ Despite legislation passed in 1948 to allow retention of a reserve of plants, the situation at the beginning of the Korean War was ominously reminiscent of World War II. In 1953 the Army Chief of Ordnance stated: "In 1950 there was no ammunition industry for the production of metal components. Our reserve plants for the production of powder and explosives, and for the loading and assembly of finished ammunition were far from being in a state of immediate readiness for production."³⁹ The conditions were actually worse in 1965. The Department of Defense had retained some ammunition plants in varying states of readiness for activation. All but 2 of the 24 ammunition-producing facilities retained by the Army, for example, were returned to active production by the end of 1967.⁴⁰ But the condition of the ammunition production base as well as the base for other commodities was inadequate and obsolete as it existed on 1 January 1965, both within the Army and the Navy. The manufacturing processes were antiquated and the equipment was sadly neglected because of the lack of funds for maintenance and required rehabilitation. For example, the landing mat industry had to develop new production equipment and techniques because of design changes in the item used in World War II. These design changes had not been identified or planned for until the item was needed to support Vietnam requirements. This caused a delay of 16 to 24 months. Concertina wire is another example. Companies were willing to produce the item, but the Government-owned production equipment that the producer required was insufficient to meet the increased SE Asia production requirements. Further, much of the equipment that was available required major rehabilitation before it could be used.⁴¹

(3) In addition, individual pieces of equipment were missing from production units in layaway.⁴² Most significant, however, was the fact that no real effort was realized in modernizing and updating the existing production base.

(4) The condition of the base was a major topic of discussion at the DOD I&L conference in 1968. One key presentation reported:

³⁶Ibid., p. 132.

³⁷Maj. Gen. A. J. Stanwick-Hay, Deputy Assistant Secretary of Defense (Materiel), Address to the National Machine Tool Builders Association in Dallas, Texas, 19 November 1969.

³⁸U.S. War Department, Office of the Chief of Ordnance, History of the Ordnance Department in WW II, Monograph No. 4, (Washington, D.C.: U.S. War Department, December 1945), pp. 5, 6.

³⁹U.S. Congress, Senate, Committee on Armed Services, Ammunition Shortages in the Armed Services, Hearings, 83d Congress, 1st Session (Washington, D.C.: Government Printing Office, 1953), p. 460.

⁴⁰Yoshpe and Franke, op. cit., p. 39.

⁴¹Defense Supply Agency, op. cit., p. 1.

⁴²Ibid., p. 2.

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"... I have been appalled at the millions of dollars that had to be spent and the time it has taken to activate our "standby" capacity for the present conflict. And then after spending these millions we are still left with processes and equipment which are worn out.... We may think and rightly so, that the 175mm gun we are using in Vietnam is the latest in modern design, but the government plant where projectiles are forged in Scranton, Pennsylvania, is limiting the firing rate because of continuous breakdowns of the wornout World War II equipment—a plant where the workers have walked out, not so much for wages, but in protest of the deplorable working conditions."⁴³

(5) This quotation speaks of the condition of the Government-owned base, of the lack of modernization of facilities and its detrimental impact on capability. This same spokesman recently told industry what it will cost to achieve modernization:

"In the ammunition base we face a modernization bill of \$5 billion. In the shipbuilding base we need to spend about \$8 billion. In the heavy weapons field we'd like to spend about \$2 billion. In the aerospace area we'd like to spend about \$3 billion. The modernization of any or all of such a production base is going to generate new business, and will also generate surplus equipment.... We believe that tools have to be obsoleted as are autos, weapons, washers, and televisions. If a production base is to stay modern, its tools have to be modern in design and in age...."⁴⁴

These statements accurately describe the condition of the Government base at the outset of Vietnam, what is wrong with it now, and, most important, what must be done to correct it.

d. Reactivation and Responsiveness. During the years preceding Vietnam, Industrial Mobilization was and in fact is today based on grossly understated requirements. Government facilities were in poor condition. Planned production schedules were based on a cold-line basis. As the Vietnam conflict escalated an additional problem arose—shortages of many items necessary to sustain the combat effort. This problem did not surface immediately; it was obscured by the magnitude and rapidity of the buildup, which resulted in unforeseen rates of consumption and the introduction of new weapons systems as well as the recall of many obsolete systems. An example of the impact on responsiveness was the production base for MK 80-Series bombs which, as stated earlier, was unprepared for the eventual high expenditure rates to be experienced. For MK 84 bombs "it took some 18 months to re-establish this production capability."⁴⁵

5. CONCLUSIONS, OBSERVATIONS, AND RECOMMENDATIONS

a. Conclusions

(1) The industrial mobilization production planning program, as it existed prior to and during the initial phases of the Vietnam era, was of limited value. During the period 1958 through 1966 the program lacked funding support and emphasis and led to deterioration of resources and the production base. What little industrial mobilization planning had been accomplished was ineffectively utilized during hostilities because of the competitive procurement environment and lack of invoking industrial mobilization plans. In 1967 the Office of the Secretary of Defense established a standardized, in-depth Industrial Mobilization Production Planning Program for all Services, but compliance has been slow and interpretations have differed. Government resources have been oriented more toward current acquisition of hardware. Industry is hesitant to expend funds and resources unless it receives adequate reimbursement for the costs of effective planning or some guarantee of future business (paragraph 3).

⁴³ Maj. Gen. A. J. Stanwix-Hay, Deputy Assistant Secretary of Defense (Materiel), Address, subject: A Concept of Intensive Management at Ramey AFB, Puerto Rico, 31 October 1968.

⁴⁴ Maj. Gen. A. J. Stanwix-Hay, Deputy Assistant Secretary of Defense (Materiel), Address to the National Machine Tool Builders Association in Dallas, Texas, 19 November 1969.

⁴⁵ Department of the Navy, op. cit., p. 15.

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(2) The computation of mobilization requirements from the Logistics Guidance is not compatible with Industrial Mobilization Production Planning policy as stated in Department of Defense Directive 4005.2. Requirements on which this planning is based are adversely affected by budget constraints that annually change such factors as force levels and intensity rates to be supported by procurement actions. The resulting low mobilization requirements, combined with poor forecasting for the SE Asia conflict, made it difficult for Services to accomplish effective Industrial Mobilization Production Planning prior to the Vietnam War and resulted in the premature loss of facilities needed to produce requirements. This basic incompatibility for requirements determinations still exists (paragraph 2c).

(3) Government ownership of selected defense facilities proved to be an important factor in improving the responsiveness of the production base and in reducing procurement lead times during Vietnam. However, activation of the Government-owned base at the outset of the Vietnam era was costly because of the need for modernization, the cannibalization of equipment, and inadequate maintenance. Despite the generally unsatisfactory condition of the Government-owned base, the cost of procurement of new industrial production equipment during the Vietnam conflict was small in comparison to that required during the Korean War. The poor condition of the industrial base as found in 1965, combined with the diversion of equipment, impaired the worldwide readiness of the United States to meet planned mobilization requirements (paragraph 4).

b. Observations

(1) The military departments should make more positive efforts to execute the Industrial Mobilization Production Planning Program. If implementation would impair other programs of equal priority, the military departments should clearly document the impact of unfunded requirements on the IMPP Program.

(2) The Office of the Secretary of Defense should consider incentives whereby industry will be induced to more effectively participate in the planned producer program.

c. Recommendations. The Board recommends that:

(LP-12) The Joint Chiefs of Staff and the Office of the Secretary of Defense establish stable guidance for industrial mobilization production planning so that long-range industrial mobilization requirements can be supported independently of the short-term variations in force structure and funding (conclusion (2)).

(LP-13) After the establishment of stable guidance for long-range industrial mobilization production planning requirements, the military departments identify and establish a sustaining base capable of supporting minimum essential long-range mobilization production requirements (conclusion (3)).

(LP-14) After approval of this sustaining base by the Office of the Secretary of Defense, the military departments prepare plans for modernization and maintenance of Government-owned facilities included in the sustaining base to achieve improved responsiveness and capacity for future contingencies (conclusion (3)).

CHAPTER VIII

SUMMARY

CHAPTER VIII

SUMMARY

1. OVERVIEW

- a. Adequate logistic support for the military forces of the United States requires extensive planning throughout the Department of Defense. The basic purpose of logistics planning is twofold: first, to establish logistic requirements relative to both the total force structure and special contingency plans; second, to develop a set of actions, utilizing the capability acquired on the basis of these requirements, to be followed in response to a contingency situation. The principal planning mechanism for providing logistic resources is the Planning, Programming, and Budgeting System, through which requirements are programmed and funded to produce a capability.
- b. In general, the operation plans that had been developed for SE Asia contingencies proved to be realistic and complete. They had correctly identified the majority of the logistic shortfalls (e.g., port constraints) that were to occur during the buildup phase. Many of the problems that developed, therefore, were the result of inadequate follow-up, either to justify and obtain required resources or to adjust the operation plan to available logistic resources, rather than the result of an inherent weakness in the plans themselves.
- c. The review of planning systems and procedures indicated that evolutionary refinements were made during the Vietnam era to enhance both responsiveness and control. However, further improvements can be made. Problems arose because of the multiplicity of the plans, line items, and organizations involved in the planning process; confusion in terminology; inadequate asset visibility; and turbulence in guidance.
- d. The elements (e.g., overseas pipeline and D-to-P levels) included in the Logistics Guidance issued annually by the Office of the Secretary of Defense for the Services' use in computing requirements changed during the 1965-1970 time frame. These changes were made in response to the Services' need for additional authorizations, as well as to reflect controls desired by the Office of the Secretary of Defense. The computation of principal item requirements was not seriously hampered; but, because of the vast number of line items and the sequential and automated aspects of the computational process, problems were experienced with secondary items. These were further complicated by the late date, relative to budget submission schedules, of issuance of approved guidance during several of the included years.
- e. The contingency planning process, as implemented in the logistics planning for Vietnam operations, was basically sound and flexible and capable of rapid expansion to meet wartime requirements. The Board's analysis of the contingency planning process indicated that improvements can be made in two essential areas:
 - (1) Reduction of the planning workload imposed by the necessity to continually update a large number of contingency plans
 - (2) Establishment of the credibility of logistic requirements to support contingency plans, particularly the hard-core requirements of those contingency plans that will provide a capability to support national strategy.

The conceptual basis for improving the contingency planning process in these areas is contained in the proposed Joint Operation Planning System, currently under development by the Joint Chiefs of Staff. This system provides criteria for the selection of a relatively small number of plans for complete, detailed planning. The plans selected for complete planning are designated OPLANS. Restricting the number of plans requiring detailed planning will reduce the planning

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workload. The credibility of hard-core contingency war reserve requirements will be enhanced by the Operation Plan Package Appraisal. This appraisal evaluates a designated set of OPLANS to determine if concurrent execution is feasible and supportable. The appraisal process will therefore identify logistic shortfalls that establish credible hard-core war reserve requirements related to contingency plans.

f. Lack of standard terminology has resulted in war reserve programs that are not easily understood or particularly well defined. For example, current war reserve concepts relate to mobilization of forces rather than to more realistic criteria of contingency operations. The many different terms used within the Department of Defense to classify war reserve materiel have added to the confusion. It is clear that a reorientation of terminology is necessary.

g. Procedures must be implemented that will provide the necessary visibility of war reserves to key levels of command for management and appraisal. To enhance the credibility of secondary-item acquisition objectives, the Services need to implement positive programs to ensure that only hard-core items are included and that both requirement and asset figures are accurate. The Air Force system is adequate to support its mission.

h. Industrial mobilization production planning has as its objective adequate and responsive utilization of the U.S. industrial base to produce combat consumables and other materiel of war at the rate required by the Armed Forces. The program, as it existed prior to and during the initial phase of the Vietnam era, was of limited value because it lacked funding support and management emphasis during the period 1958 through 1966. Lack of support and emphasis led to a deterioration of the production base for defense needs in many areas, and only now is this base beginning to receive support. What little industrial mobilization planning had been accomplished was ineffectively utilized because of the competitive procurement environment and the lack of invoking industrial mobilization plans. In addition, the U.S. production base was supporting an expanding civilian economy, which had an adverse effect on the responsiveness of the industrial base to Vietnam requirements.

i. The preceding paragraphs briefly summarize those major aspects of logistics planning covered in this monograph. The balance of this chapter presents the major lessons learned and lists the most important 9 of the 14 recommendations developed within the monograph.

2. REQUIREMENTS FORECASTING

a. Lessons Learned

(1) In general, Logistics Guidance provided an adequate basis for the calculation of principal item requirements for support of SE Asia operations. The roles, missions, size, and organization of each of the Services were factors that dictated the organizational level at which the functions of requirements determinations and computations were performed. Service requirements forecasting processes for principal items were adequate for support of Vietnam and should be retained.

(2) The short period of time available for computing requirements for secondary items (from the time Logistics Guidance was issued until the date budget programs had to be submitted) created a computational problem. This problem existed even though the forecasting function had been computerized. Changes in the fundamental elements authorized in Logistics Guidance (e.g., overseas pipeline, post-D-Day safety level, training, and D-to-P authorizations) required modification of basic computer programs. This modification was both time-consuming and expensive when the computation process had to be done on short notice. Conversely, changes in the numerical values of these elements require only a reprocessing of data that could be accomplished at a nominal cost in time and dollars.

b. Recommendation

(LP-1) The Secretary of Defense guidance concerning logistics be published as stable regulatory documents to facilitate computerized development of materiel requirements.

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Fundamental elements such as overseas pipeline, post-D-Day safety level, training, and D-to-P authorizations should be stable elements of the Logistics Guidance, although the value for any element may change. Further, when changes to the list of fundamental elements are necessary, they should be published 1 year before the date the Services and Defense agencies have to submit budgets incorporating such changes to the Office of the Secretary of Defense.

3. CONTINGENCY PLANNING

a. Lessons Learned

(1) The contingency plans in being for SE Asia operations were generally well-conceived, addressed logistics in detail, and identified shortfalls that would impact on the conduct of operations. Action, however, had not been taken to alleviate all the identified logistic shortfalls prior to the execution of combat operations. The adverse impact of these shortfalls on operations in SE Asia indicated that a higher degree of positive follow-through action is needed to ensure that total resource capability acquired by the Services' logistic systems is adequate to meet both their own force-structure-related materiel requirements and the Special Contingency War Reserve requirements developed within the unified command logistics planning system. Thus, Vietnam experience demonstrated that, for maximum effectiveness, planning for the logistic support aspects of contingency plans should include the following steps:

- (a) Development of credible resource requirements to support a desired military posture.
- (b) Ascertainment of whether the objectives of a special contingency plan can be supported with available resources. Shortfalls in on-hand or programmed resources should be formally identified and used to establish additional requirements in the Planning, Programming, and Budgeting System.
- (c) Modification of contingency plans as may be required to reduce the objectives to those that are compatible with available resources or funding, or to reflect the increased capability to attain objectives resulting from increased assets.

(2) Accomplishment of the last two of the preceding steps was not and will not be feasible for all contingency plans. The administrative workload associated with conducting complete, detailed planning for all plans and determining the capability of supporting all plans is prohibitive. In addition, funding constraints will never permit procurement of the assets required to support all plans. Therefore, selectivity criteria must be established to identify those plans that warrant complete processing. The Joint Chiefs of Staff are currently developing a Joint Operation Planning System to break logistics planning for contingencies into manageable segments. This system proposes to divide contingency plans into two types of plans:

- (a) Complete plans (OPLANS)
- (b) Concept plans (CONPLANS).

Complete plans will be prepared for only those contingency situations wherein execution would (1) tax total resources (either force, logistic, or mobility) available to support the plan or (2) be likely to occur within the Joint Strategic Capabilities Plan time frame. Concept plans will be abbreviated plans that will be fully developed when necessary. Complete plans will be developed in full detail and the review process will analyze logistic support capabilities and requirements.

- (3) Two types of reviews are provided:

- (a) Individual plan review for each complete plan.
- (b) Review of a designated set of complete plans in an Operation Plan Package Appraisal, which will test the feasibility of concurrent execution of the two or more plans in the set.

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(4) Although provided for under current procedures, an adequate logistic appraisal of the package of contingency plans that collectively identify what resources are required to implement military strategy (as defined in the Joint Strategic Capabilities Plan) has never been accomplished. The package of contingency plans scheduled (as part of the Joint Operation Planning System) to undergo an annual Operation Plan Package Appraisal will serve this purpose if identified shortfalls are treated as hard-core requirements. Such Special Contingency War Reserve requirements would be additive to the total Force Structure War Reserve requirements and should be strongly supported for funding in the Planning, Programming, and Budgeting System. A lesser priority would be afforded identified shortfalls in plans selected for complete processing (OPLANS) but not included in the Operation Plan Package Appraisal.

b. Recommendations

(LP-2) The Joint Chiefs of Staff, in coordination with the Services, expedite the implementation of the proposed procedures currently under development in the Joint Operation Planning System.

(LP-3) The Joint Chiefs of Staff and the Services use those contingency plans, designated as complete plans, as follows:

(a) The critical shortfalls identified in those complete operation plans designated to undergo an Operation Plan Package Appraisal to determine logistic supportability should be validated as credible hard-core Special Contingency War Reserve requirements. These requirements would be additive to the total Force Structure War Reserve requirements and be recognized by the Department of Defense in the Planning, Programming, and Budgeting System. If the economic or political situation or higher Service priorities preclude funding, then the requirement should remain valid until satisfied.

(b) The logistic requirements of those complete operation plans that are not in the designated package will be compared with logistic assets, on hand or programmed, to establish additional Special Contingency War Reserve requirements that should also be considered for additional support under the Planning, Programming, and Budgeting System.

4. WAR RESERVES

a. Lessons Learned

(1) The multiplicity of terms, some with entirely different applications, used throughout the Department of Defense in the management of war reserves has seriously impaired effectiveness and understanding of the system. For example, as noted in the chapter on contingency planning, current concepts and procedures do not clearly distinguish between those war reserves directly related to support of the force structure and those required for special support of contingency plans. This ambiguity has made it difficult for component commands to identify and support Special Contingency War Reserves. Fewer and better defined classifications of war reserve materiel are needed.

(2) An excessive range of war reserve secondary items causes a lack of credibility at higher level budget reviews, creates almost insurmountable management problems, and requires vast amounts of clerical and management labor.

(3) Each Service must maintain status information on war reserves to permit sound logistic appraisals and to develop and support funding requirements. The Air Force has developed a system that fulfills these objectives and reflects a deployment concept that is dependent on a relatively small number of line items of war reserve materiel. The other Services now have ongoing programs to obtain improved visibility over their war reserve assets.

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b. Recommendations

(LP-5) The Joint Chiefs of Staff provide common terminology so that for all purposes the identification and management of all war reserves, except Industrial Mobilization Facilities, be accomplished within the following three major categories:

(a) Force Structure War Reserves—Those materiel reserves authorized by the Secretary of Defense for the support of, and based on the composition of, the approved forces shown in the Five Year Defense Program.

(b) Special Contingency War Reserves—Those materiel reserves that are authorized, procured, and maintained to support unique requirements identified by logistic appraisal of specific operation plans that are not contained in or justified by the composition of the approved force structure.

(c) Economic Retention War Reserves—Those on-hand assets of war reserve materiel that are excess to levels approved for procurement by the Secretary of Defense and that can be economically held against some plausible future requirement.

(LP-10) Each Service limit requirements for secondary items of Force Structure War Reserves to a minimum range of items necessary to sustain combat until additional resources can be made available from production. Initially, each Service should establish an arbitrary ceiling list of minimum requirements so as to give credibility for funding support to the essential hard-core items.

(LP-11) The Services' ongoing programs to obtain visibility over War Reserve Assets be actively pursued to the extent necessary to establish a pyramidal reporting system with focal points at each concerned echelon to maintain cognizance of the War Reserve Program.

5. INDUSTRIAL MOBILIZATION PRODUCTION PLANNING

a. Lesson Learned

Industrial mobilization production requirements were unrealistically low in many areas at the beginning of the Vietnam conflict. This condition, combined with low budgetary support for the industrial base, resulted in a premature loss of facilities needed later to produce Vietnam requirements and impaired U.S. worldwide readiness for other contingencies. In retrospect, had longer-range, more-stable guidance been provided for industrial mobilization production planning, requirements would have been more realistic, overall costs would have been less, and responsiveness to Vietnam needs would have been more effective.

b. Recommendations

(LP-12) The Joint Chiefs of Staff and the Office of the Secretary of Defense establish stable guidance for industrial mobilization production planning so that long-range industrial mobilization requirements can be supported independently of the short-term variations in force structure and funding.

(LP-13) After the establishment of stable guidance for long-range industrial mobilization production planning requirements, the military departments identify and establish a sustaining base capable of supporting minimum essential long-range mobilization production requirements.

(LP-14) After approval of this sustaining base by the Office of the Secretary of Defense, the military departments prepare plans for modernization and maintenance of Government-owned facilities included in the sustaining base to achieve improved responsiveness and capacity for future contingencies.

APPENDIX A

LOGISTICS GUIDANCE OF THE SECRETARY OF DEFENSE

FOR FY 63 THROUGH FY 72

(Appendix A is classified and is bound separately.)

APPENDIX B
LIST OF ACRONYMS AND ABBREVIATIONS

APPENDIX B

LIST OF ACRONYMS AND ABBREVIATIONS

ABFC	Advanced Base Functional Component
ADP	Automatic Data Processing
AFEMS	Air Force Equipment Management System
AFLC	Air Force Logistics Command
AFR	Air Force Regulation
AFSC	Air Force Systems Command
AMA	Air Materiel Area
AMC	Army Materiel Command
AR	Army Regulation
ASF	Army Stock Fund
ASPPO	Armed Services Procurement Planning Officer
ASW	Antisubmarine Warfare
BLSS	Base Level Self-Sufficiency
CG	Commanding General
CHMAAG	Chief, Military Advisory and Assistance Group
JINCPAC	Commander in Chief, Pacific
CINCPACAF	Commander in Chief, Pacific Air Forces
CINCPACFLT	Commander in Chief, Pacific Fleet
CINCSTRIKE	Commander in Chief, Strike Command
CINCUSARPAC	Commander in Chief, U.S. Army, Pacific
CMC	Commandant of the Marine Corps
CNM	Chief of Naval Material
CNO	Chief of Naval Operations
COMSERVPAC	Commander, Service Force, Pacific
COMUSMACV	Commander, U.S. Military Advisory Command, Vietnam

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CONPLAN	Concept Plan
CONUS	continental United States
CRAF	Civil Reserve Air Fleet
CTG	Commander, Task Group
CTZ	Corps Tactical Zone
DA	Department of the Army
DCA	Defense Communications Agency
DCAS	Defense Contract Administration Services
DCS	Defense Communications System
DCSLOG	Deputy Chief of Staff, Logistics
D-Day	The unnamed day on which a particular operation commences or is due to commence
DINS	Directorate of Inspection Services
DIPEC	Defense Industrial Plant Equipment Center
DOD	Department of Defense
DODD	Department of Defense Directive
DODINST	Department of Defense Instruction
DSA	Defense Supply Agency
EOQ	Economic Order Quantity
FBM	Fleet Ballistic Missile
FLC	Force Logistic Command
FLSG	Force Logistic Support Group
FLSU	Force Logistic Support Unit
FMF	Fleet Marine Force
FMFPAC	Fleet Marine Force, Pacific
FOB	Forward Operating Base
FSN	Federal Stock Number
FSR	Force Service Regiment
FYDP	Five Year Defense Program
GSA	General Services Administration

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G-4	Senior Logistics Office of Army or Marine Corps Staff
HAWK	Homing—All-the-way-killer
ICP	Inventory Control Point
IMPP	Industrial Mobilization Production Planning
IPM	Industrial Preparedness Measure
JAPSS	Joint Automated Planning Support System
JCS	Joint Chiefs of Staff
JLRB	Joint Logistics Review Board
JOPS	Joint Operational Planning System
JSCP	Joint Strategic Capabilities Plan
J-4	Office of the Director of Logistics, Joint Staff
LOC	Line of Communications
LOTS	Logistics Over-the-Shore Operations
MAF	Marine Amphibious Force
MAP	Military Assistance Program
M-Day	Mobilization Day
MEF	Marine Expeditionary Force
MIDA	Major Item Data Agency
MILSTRIP	Military Standard Requisition and Issue Priorities
MLSF	Mobile Logistic Support Force
MOB	Main Operating Base
MORSL	Mobilization Reserve Stockage List
MSTS	Military Sea Transportation Service
NATO	North Atlantic Treaty Organization
NAVAIR	Naval Air Systems Command
NAVFAC	Naval Facilities Engineering Command
NAVSUP	Naval Supply Systems Command
NICP	National Inventory Control Point
NMC	Naval Material Command

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NORE	not operationally ready—supply
NSP	Navy Support Plan
OASD(I&L)	Office of the Assistant Secretary of Defense (Installations and Logistics)
OAWRR	Other Acquisition War Reserve Requirements
OPLAN	Complete Plan
OPNAV	Office of the Chief of Naval Operations
OPPA	Operation Plan Package Appraisal
OSAF	Office of the Secretary of the Air Force
OSD	Office of the Secretary of Defense
PACOM	Pacific Command
P-Day	That point in time at which the rate of production of a military item meets and will continue to meet the estimated consumption rate
PEMA	Procurement of Equipment and Missiles, Army
PIRR	Pre-positioned War Reserve Interrogation and Readiness Reporting System
POL	petroleum, oil, and lubricants
PPBS	Planning, Programming, and Budgeting System
PRIMAR	Program to Improve Management of Army Resources
PWR	Pre-positioned War Reserves
PWRS	Pre-positioned War Reserve Stock
RCS	Reports Control Symbol
ROK	Republic of Korea
SAC	Strategic Air Command
SE Asia	Southeast Asia
SEATO	Scutheast Asia Treaty Organization
SECNAVINST	Secretary of the Navy Instruction
STRATCOM	Strategic Communications Command
TA	Table of Allowance
TAADS	The Army Authorization Document System

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TAC/USARSTRIKE	Tactical Air Command/U.S. Air Force Strike Command
TAERS	The Army Equipment Records System
T-Day	Termination Day
TIMAR	Near-Term Improvements in Materiel Asset Reporting
TM	Technical Manual
TOC	Technical Order Compliance
TOE	Table of Organization and Equipment
UE	Unit Equipment
UMMIPS	Uniform Materiel Movement and Issue Priority System
USAF	U.S. Army Force
USAREUR	U.S. Army, Europe
USARPAC	U.S. Army, Pacific
USARYIS	U.S. Army, Ryukyu Islands
USCONARC/USARSTRIKE	U.S. Continental Army Command/U.S. Army Strike Command
USMC	U.S. Marine Corps
VETF	Vietnam Expediting Task Force
WCDO	War Consumable Distribution Objective
WESTPAC	Western Pacific
WMP	War and Mobilization Plan
WRM	War Readiness Materiel
WRSK	War Readiness Spares Kit

APPENDIX C
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